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NEW YORK CITY'S NEW PUBLIC BATH

Building Architecturally Pleasing—One Hundred and Fifty-two Shower Baths—Large Swimming Pool—Some Details of Construction and Operation—Filtered Water and Forced Ventilation

NEW YORK city's newest public bath was opened to the public on the evening of January 20 by Borough President John F. Ahern. During the opening ceremonies there were swimming races which were notable because of the fact that the 50-yard and 250-yard records were broken. This bath is the most ornate of any yet built by New York and possibly by any other municipality in the world.

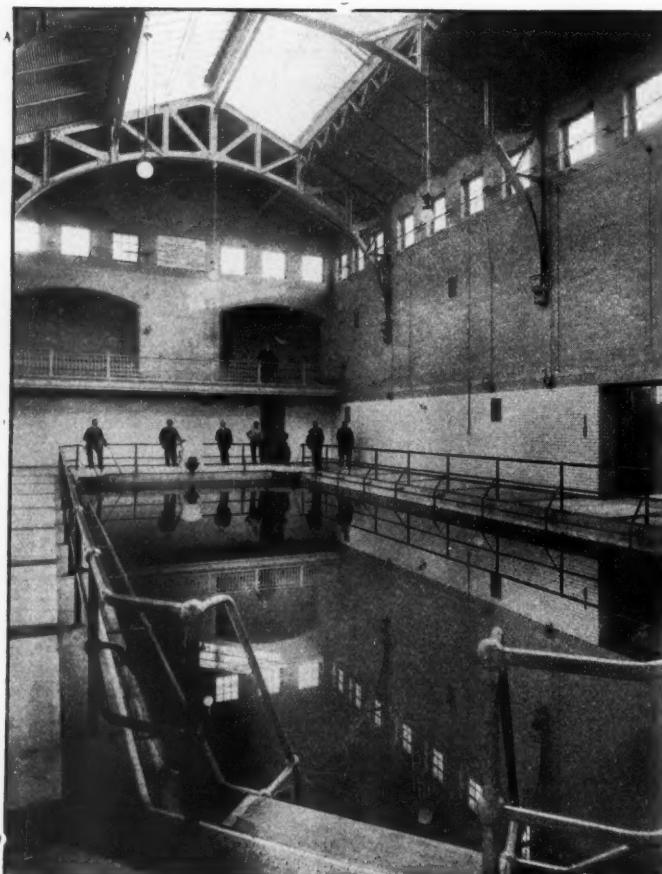
This bath-house is located between Twenty-third and Twenty-fourth streets on the easterly side of Avenue A, adjoining the East River. The outer walls are of Harvard brick laid with Flemish bond. The base is of sand stone, and sand stone and terra cotta ornaments are used.

The bath-house proper is 164 by 70 feet in plan, in addition to which is a boiler and engine room in the rear 66 by 50 feet.

A large part of the front of the building is taken up with two waiting rooms, one for men and the other for women, each with 50 feet frontage and 25 feet deep; an office for attendants being located between these and opening into both. Behind the waiting rooms and at the same level are the shower baths. The two large shower rooms, one for each sex, are separated by a natatorium which is used by each alternately. From the waiting rooms bathers enter the shower rooms directly. Exit from each of the shower rooms is had by means of

another door opening onto the sidewalk. The natatorium can be entered from these rooms only. Adjoining and in the rear of each shower room is a toilet room.

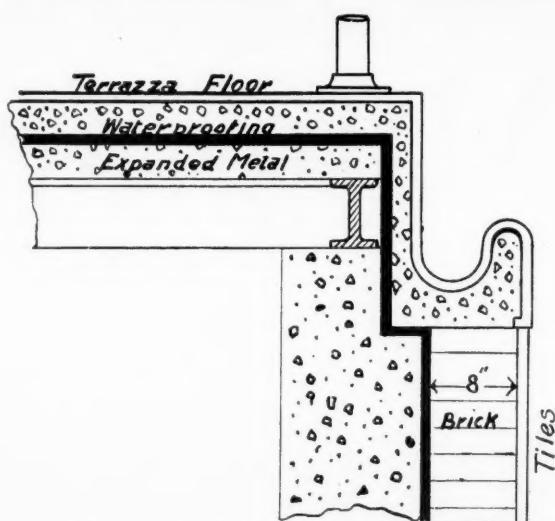
In the natatorium, which is 42 feet by 82 feet 5 inches, is the swimming pool, 25 feet by 65 feet 5 inches. The bottom of this slopes so that the water in one end is 5 feet deep and in the other end 8 feet. The pool is lined with white tile. Felt and asphalt water proofing is embedded in the concrete walls of the pool and has, so far, proven entirely adequate for its purpose. A brass railing surrounds the pool above the floor and another is placed inside of the pool and about a foot above the



SWIMMING POOL, NEW YORK BATH

water level. The natatorium, like the rest of the building, is floored with terrazzo and this is laid off in squares of different colors. Between the squares are joints at which it is expected that all expansion and contraction will take place, thus preventing the formation of irregular cracks in the floor. The walls of this room are finished part way up with white enameled brick and the upper part is of vitreous faced brick. A balcony at one end of the natatorium provides a place for spectators. The water in the plunge is changed every day and arrangements are made for introducing hot water at the bottom of the tank and cold water from an ornamental bronze head about two feet above the water level, so that a thorough mixing and an even temperature may be obtained.

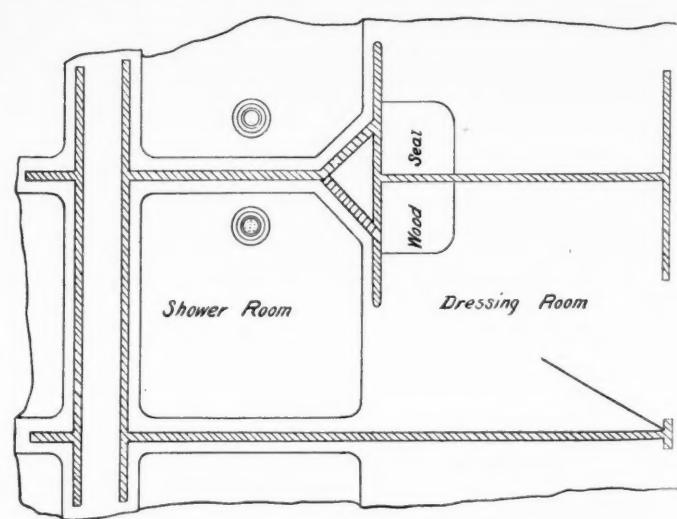
An admirable feature of this plunge is the terrazzo gutter that surrounds the pool, a section of which is shown in the illustration. This prevents any water which



DETAIL OF GUTTER AROUND SWIMMING POOL

is splashed onto the floor from carrying back into the pool and dirt which may be thereon. In this room, as in all the building, particular care has been taken to adapt all details to thorough sanitation; one illustration of which is seen in the molded terazzo coves at all points where the floors and walls join.

The shower baths for men and women are exactly alike and there are 76 of these in each shower room. In the same compartment with each shower is a dressing room. The keys of these rooms are fastened to rubber bands which may be carried around the neck while in the plunge. Each shower is controlled by one valve only, which, when partly open, allows only cold water to flow; further opening admits warm water and the temperature of the combined water may be increased at will; except that the valve may not be opened sufficiently far to raise the temperature above a certain fixed point. This device prevents accidental burning which might result from turning the wrong valve, if there were one to each pipe.

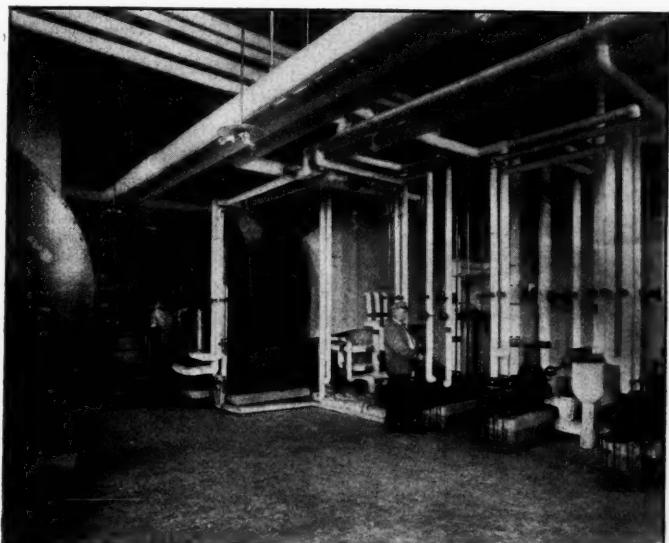


PLAN OF SHOWER BATH COMPARTMENT

The shower compartments are separated by white Italian marble slabs 7 feet high, topped by glass screens about one foot high. No overhead pipes are used, the water being brought up between the booths from mains under the floor. Each dressing room is 4 feet by 3 feet 6 inches,

inside dimensions, and the connected shower bath compartment is 3 feet 6 inches square. No one is allowed to enter the plunge without first having had a shower bath. The plunge is used on alternate days by males and females.

All water used in the baths is filtered in four Loomis Improved Filters and is supplied by means of two Blake pumps. Ventilation is effected by two Buffalo Forge Company's blowers, one of which forces in heated air, while the other exhausts the vitiated air. The temperature is regulated by Johnson Service Company's thermostats.



INTERIOR OF ENGINE ROOM

Although this bath has been open to the public but a short time, the use made of it by the people of the neighborhood has already demonstrated their appreciation of it and its value.

The architect of the building was Arnold W. Brunner, and Luke A. Burke & Sons were the contractors, to whom we are indebted for the above description and illustrations.

Brooklyn Baths and Comfort Stations

DURING the year 1906 five public indoor baths were in operation in the Borough of Brooklyn and were considered one of the most important branches of the work of the Bureau of Public Buildings. The total number of baths taken was 2,105,129; the least number were taken during December, 99,298; the greatest during August, 273,026; although in June and July the number was nearly as great. Of the total number, 1,452,249 were taken by men and 652,880 by women. Soap and towels are sold at these bath houses and private rooms for tub bathing are charged for; the total revenue from these during the year having been \$11,414.61.

There were also in use during the year, five floating baths, which were open from the middle of June to September 23. The total number of baths in these were 1,047,221, of which 159,728 were by men, 74,013 were by women, 569,006 by boys and 244,474 by girls. The baths were open from 9 a. m. to 5 p. m., and some days later.

Their maintenance was estimated to have cost about 1½ mills per bather. One very serious question in connection with these baths is the danger of bathing in the waters adjacent to the city because of the sewage pollution which is increasing every year.

Six public comfort stations were in use, the construction of which cost \$128,000. All of these are underground. Four are in the form of an equilateral triangle, 60 feet on a side. The other two are rectangular, approximately 80 by 18 feet. Each has an interior height of 8 feet and is divided into two compartments. The construction of all of them is of steel and masonry, excepting the doors. The interior consists mainly of marble and enameled brick; the ceiling of cement finish and the floor of Kosmocrete. They are lighted by vault lights by day and by electricity at night. They are heated and ventilated by fresh air drawn through hot water coils by electric fans and then forced through flues and registers into the two compartments. The foul air is exhausted by additional electric fans through registers placed in each toilet room and thence through flues to the outside air. By this means the air is changed almost every ten minutes. These were used during the year by 10,057,736 men and by 1,676,956 women.

CITY BIDDING ON CONTRACT WORK

In the city of Toronto, Canada, it has been the practice for the City Engineer to bid upon contracts for sidewalk and street paving and sewer work in competition with contractors, the Engineer being awarded the contract when his bid is the lowest and performing the work by day's labor at the expense of the city. This method seems to have been applied to small contracts only, the total cost of any one seldom running over \$1,000, and in no work so constructed during 1906 did the cost exceed \$1,400. During that year the Engineer's bid was the lowest on 154 contracts, 101 of which were sidewalks, 35 were roadways, and 18 were curbs. Of these, 101 were constructed by day's labor, 54 were awarded to contractors at the city's bid, and construction of 30 was postponed until the following season. In addition, two contracts were taken from successful bidders and constructed by day's labor on account of dilatoriness on part of the contractors.

During the season the difference between the bid of the lowest contractor and the cost to the city, of sidewalk contracts constructed by them, showed a balance of \$2,06c in favor of the city; the total actual expenditure on these being \$19,045.

In addition to the above, contracts were awarded to the engineer in the same way for reconstructing one macadam roadway, constructing two macadam roadways, one asphalt block pavement, five brick pavements, four granite block pavements, and one stone curbing. The saving on these pavements over the bid of the lowest contractor was \$15,831. It was also estimated that the city should be credited with the cost of inspection, which was not required on work performed by itself, which inspection would have cost \$1,923. The report does not

state whether the figures given as cost include any allowance for tools; but as the cost is that which the property-owners are called upon to pay—that is, the reimbursement which the city demands for performing this work—it seems probable that it would include all such items of expense. It is stated that this cost does not include interest on the money.

The sewers constructed by day's labor cost \$11,852—the saving to the city on constructing these being \$2,901.

We give herewith tables showing the nature of the work performed by the engineer, the city's bid for the same, the next lowest bid, and the actual cost; these showing the bids for all work awarded to the engineer during that season. It is found from these that the cost of 4-foot concrete sidewalk averaged 13.4 cents per square foot, that of 4½-foot sidewalk, 12.9 cents; that of 5-foot sidewalk, 13 cents, and that of 6-foot sidewalk, 12.8 cents. The average of the lowest bids from contractors on 4-foot sidewalk was 63.3 cents, city's bid 60.7

CITY BIDDING ON CONTRACT WORK

Sewers.

Kind	Length	BID FOR WORK		Actual Cost
		City's	Next Lowest	
12" tile	276 ft.	\$579.00	\$699.00	\$325.48
12" "	760 "	1,805.00	1,979.70	1,355.31
12" "	250 "	390.00	442.00	202.96
3' box	462 "	1,350.00	1,388.00	1,318.87
12" "	750 "	1,211.00	1,225.00	676.71
12" "	708 "	1,082.00	1,106.00	794.84
12" "	324 "	575.00	613.00	393.46
12" "	1,015 "	1,590.00	1,599.00	1,082.96
Totals.....		\$8,582.00	\$9,051.70	\$6,150.59

Concrete Walks

Width in Feet	BID PER LIN. FOOT		Actual Cost	Width in Feet	BID PER LIN. FOOT		Actual Cost
	City's	Next Lowest			City's	Next Lowest	
* 4	\$1.00	\$1.02	\$1.012	* 4	\$0.98	\$1.05	\$0.977
6	.84	.90	.762	* 4	1.00	1.05	.999
6	.81	.84	.787	* 5	1.13	1.14	1.013
5	.65	.67	.648	* 5	1.12	1.16	.947
12½	1.60	1.95	1.933	5	.67	.68	.666
5	.60	.62	.605	5	.63	.67	.68
* 3½	.88	.98	.792	5	.72	.75	.711
4½	.58	.60	.576	5	.75	.80	.663
* 4½	.58	.60	.587	* 5	1.15	1.17	1.030
* 4	.98	1.04	.88	* 3	.47	.49	.394
* 5	1.15	1.19	.998	* 3	.47	.49	.464
* 4	.89	1.09	.993	* 4	.95	.97	.857
* 4½	1.06	1.08	.915	5	.70	.71	.585
* 4½	1.06	1.08	.909	5	.79	.82	.725
* 5	1.16	1.22	1.141	* 4	.95	.97	.742
5	.72	.74	.711	* 5	1.14	1.15	.983
5	.67	.69	.604	6	.75	.75	.724
* 6	1.25	1.27	1.026	* 4	.98	1.09	.894
12	2.16	2.28	1.968	4	.62	.64	.514
* 8½	1.64	1.85	1.725	* 5	1.10	1.16	.763
5	.72	.75	.711	5	.62	.70	.585
5	.65	.67	.607	* 4	.98	.99	.906
5	.68	.70	.651	5	.75	.76	.680
4	.60	.63	.56	* 5	1.11	1.13	1.129
4	.60	.63	.53	* 10	2.25	2.30	2.262
6	.80	.82	.793

* Includes concrete curb.

cents, and actual cost 53.5 cents. On 4-foot sidewalk with concrete curb, the average of the lowest bids from contractors was \$1.031, average of city's bids, 96.8 cents, and average actual cost 91.8 cents. On 5-foot sidewalk, the average lowest bid from contractors was 70.8 cents, the average city bid 68.1 cents, and the average cost 65.1 cents. On 5-foot sidewalk with curb, the average lowest bid from contractors was \$1.165, from the city \$1.133, and the average cost \$1.00. On 6-foot sidewalk the average lowest bid from contractors was 82.9 cents, from the city 80 cents, and actual cost 76.6 cents.

Paving Brick Bids

THE Department of Public Works, of Detroit, Mich., recently contracted for the furnishing of paving block, 1,000,000, more or less, to be furnished of each of six makes. These were bid upon under three specifications, one calling for brick delivered f. o. b. cars on siding, a second for the same brick delivered on the street, and the third delivered on the street and with a three-year guarantee. The number of brick required per square yard was guaranteed, one make requiring 39, four requiring 40 and one 40½ brick. Reduced to cost per square yard the bids under the first plan ranged from 77 cents to 79.4 cents; under the second plan from 83.4 cents to 85.5 cents; and under the third plan from 84.24 cents to 85.5 cents. Only one bidder charged more for guaranteed brick than for unguaranteed—a condition which, on its face, would appear to indicate that no wear or breakage or other necessity for repairs during three years was anticipated by the bidders. This seems the more probable because the one exception was the cheapest brick offered in the fifteen bids submitted, which would naturally be expected to wear out more quickly than the more expensive brick. The highest bid for guaranteeing was 4½ cents per square yard for the three years.

For distributing from cars to street the bids per square yard varied from 6 to 6.5 cents among the successful bidders, averaging 6.27 cents; the average of all bidders being 6.76 cents.

Brick Paving Ohio Highways

BRICK as a paving material for highways outside of cities is no longer exceptional in a number of States, and the State Department of Highways of Ohio has recognized this by embodying in the annual report for 1907 specifications for paving highways with this material. These provide for a foundation of limestone, furnace slag, sandstone, gravel or broken sewer pipe, with sufficient fine material to prevent the sand cushion filtering through; this to be thoroughly rolled. One inch of sand cushion is placed on this and shaped to a proper cross section. The brick is to be sound, tough, Ohio river fire clay paving brick, or other make of vitrified, machine-pressed brick. The pavement, after being rolled and brought to a correct surface, is to be covered with one-half inch of clean, dry sand. The absence of concrete foundation or cement filler keeps the cost down, but is not advisable for city streets.

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It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

FEBRUARY 12, 1908.

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Cities Bidding on Public Work

FOR a City Engineer, representing the city, to compete directly with contractors for municipal work is, we believe, a practice not followed by many cities, but its operation in Toronto, Canada, is described in another column. If the work could be done as economically by the city, it should be lowest bidder on all contracts, since it does not have to add a profit to the estimated cost. We do not suppose, however, that this result would be desired by any city; but that the object is rather to prevent inordinately high bids because of agreements among contractors or for other reasons. An examination of the figures shows a somewhat remarkable agreement between the city's bids and the next lowest in such contracts as it received. The apparent saving to the city of about \$22,700, aside from its effect in keeping down other bids, certainly seems to argue favorably for this method.

MILWAUKEE REFUSE DISPOSAL REPORT

THERE was recently presented to the Council of Milwaukee, Wis., a report by Rudolph Hering, on disposing of the city's refuse, which was based upon an unusually careful examination of the local conditions, and which contains, besides recommendations having special bearing upon this case, others of a more general nature. The city is at present burning its garbage in an Engel furnace on Jones Island, which furnace cost \$91,500 in 1902. The capacity of the furnace has been outgrown, and an additional difficulty is connected with its location upon an island, transportation to which is occasionally interfered with in winter and stormy weather and also adds considerably to the expense of collection, this additional cost being estimated at \$20,000 in 1906. In addition to this is the expense and trouble of delivering coal at the plant. "Notwithstanding the objections to the present garbage plant, it has, in a measure, been successful; it has demonstrated that the garbage can be burned in a sanitary manner without nuisance or offense and that it can be completely burned."

The author considered at length both reduction and incineration. He concluded from the fact that reduction works invariably have been offensive, that they should be located outside of the city; other large cities having placed them from five to fifteen miles from the populous districts. On the other hand, there has been no complaint of the present Milwaukee incinerator, and similar plants have been operated in the built-up sections of other cities without offense; it was therefore concluded that such a plant could be placed within the city limits of Milwaukee. If a garbage reduction plant were employed the rubbish should still be incinerated. For these and other reasons he recommends a 300-ton incineration plant.

Analyses of Milwaukee's garbage were made by Prof. R. E. W. Sommer, of that city, and he found in dry garbage 8.77 per cent. of grease, 1.61 per cent. of nitrogen, 12.50 per cent. of glucose, and 2.31 per cent. of phosphoric acid. Total combustion gave 61.88 per cent. of ashes and 38.12 per cent. of combustible matter. Wet garbage was found to contain 78 per cent. of water. It was found that if placed to a height of 8 inches in a barrel, 0.67 per cent. of water drained off; at a height of 16 inches, 7.05 per cent. drained off; and at a height of 24 inches, 9.33 per cent. drained off.

It was assumed that during transportation this last percentage of water would be removed from the garbage by its own weight and would not be placed in the furnace; in consequence of which it would be necessary to evaporate not 78 per cent., but only 68 2-3 per cent. of water. To do this would require 66,371 B. T. U. per 100 pounds of garbage. Adding the heat required to raise the temperature of the garbage to the boiling point, the total amount required would be 82,173 B. T. U. One pound of dry garbage was found to give 4,522 B. T. U., and the 22 pounds of dry matter in 100 pounds of wet garbage would therefore generate 99,484 B. T. U., from which it is concluded that after 9 1-3 per cent. free moisture has been removed by its own pressure, garbage should burn

itself without additional coal, under perfect conditions. In the incinerating plant now used, 2,814.43 tons of coal were used for burning the garbage during 1906, the total amount burned during that time having been 35,245 tons; the coal used having therefore averaged about .08 ton of coal per ton of garbage. The amount of clinkers and ashes from the burned garbage and coal of this plant is about .053 ton per ton of garbage.

During 1906 the total cost of collection was \$63,836.75; the cost of cremating was \$47,816.31; and \$1,551.30 was expended in burying 3,281 tons. The cost of collection includes the salaries of the superintendent, time-keeper, collector of small animals, garbage collectors, telephone service and incidentals. The cost of cremating includes, besides the operation of the plant, the cost of garbage boxes and their repair, these boxes being arranged to be removed when full, from the wagon bodies and carried to and into the plant. Of the cost of burial, \$300 was for rent of land used.

GARBAGE COLLECTION AND INCINERATION IN 1906

MONTH	Public Collection Tons	Private Collection Tons	Small Dead Animals Tons	Total Tons	COST PER TON FOR	
					Collection	Incineration
January.....	2,419	31	5	2,455	\$2.32	\$2.87
February.....	2,332	32	4	2,368	2.09	2.35
March.....	2,825	31	5	2,861	1.91	2.20
April.....	2,381	34	6	2,421	2.14	1.83
May.....	2,999	...	8	3,007	1.72	1.10
June.....	4,173	7	10	4,190	1.39	1.06
July.....	4,035	11	7	4,053	1.43	1.05
August.....	4,373	45	9	4,427	1.43	0.94
September.....	3,951	12	6	3,969	1.44	1.17
October.....	3,430	23	5	3,458	1.48	1.08
November.....	2,932	23	5	2,960	1.66	1.79
December.....	2,362	14	5	2,381	1.75	1.53
Totals and averages.....	38,212	263	75	38,550	\$1.66	\$1.35

To ascertain the cost of hauling per ton mile, seventeen collectors were selected on September 1 out of the ninety-five employed, representing districts from all parts of the city. The distance each one traveled was carefully measured on the map. It does not include the distance from the collector's home to the point where he started to collect, nor his return home after the garbage was delivered. Nor does it include the tour made while he is filling his wagon. It includes merely the distance for the center of his collecting district to the hoist, his return for his second collection, and the delivery of his second load.

It was found that the average distance traveled by each collector in one day as above outlined was 7.2 miles. One load equals 0.796 ton. As the average day's work for each collector is two loads, therefore he collects in one day twice 0.796, or 1.592 tons.

On a basis of \$2.50 a day, the cost of collecting was 22 cents per ton mile, or \$1.58 per ton, for teams only.

Mixed loads of ashes and rubbish weigh on an average 2,600 pounds per 2.5 cubic yards. The same amount of dry manure weighs 2,425 pounds; of clear ashes, 3,025 pounds; and of rubbish, 1,625 pounds.

Concerning disposal in general, Mr. Hering states that garbage is the most important, because if left to itself it soon becomes putrid and offensive. Next in importance is rubbish, because, owing to its origin, it is the most likely part of the refuse to harbor the worst dangers to health, such as the bedding, soiled clothing, dust and old furniture discarded from sickrooms. Third in importance is stable manure.

In connection with the burning of ashes mixed with garbage, he argues as follows:

If coal is worth \$3.75 per ton, then, as the amount of coal in domestic ashes can be safely taken at 20 per cent. of the whole, the fuel value of a ton of ashes in an incinerator which is kept at a temperature of at least 1,200 degrees F., when

all coal would be consumed, is worth \$0.75. If we reckon the expense of hauling at 25 cents per ton mile, it would pay to haul such ashes three miles. On the other hand, there is a fuel value to ashes, but this is maintained after complete incineration. And there is the expense of a larger grate area for adding ashes to the incinerator, which must also be considered in the cost estimate.

If rubbish is burned, then, as it has a calorific value in American cities of about one-fifth that of coal, and if coal is worth \$3.75 a ton, we can value a ton of rubbish also at \$0.75, and it will pay to haul it as far as the ashes, if it were not a sanitary requirement to destroy it by fire even at a greater cost.

If garbage is burned with other refuse, separation is not customary, and, at first glance, seems to have no advantage. In my opinion, however, garbage should continue to be separately collected and delivered. As garbage should at some seasons be collected daily, while the other refuse can be collected at longer intervals, there is an advantage in limiting the more frequent service to the single material which requires rapid delivery. There is also the advantage of expelling some of the free water of the garbage (according to Prof. Sommer, about 9 per cent.), by the pressure of its own weight. There is also the advantage of evaporating an additional amount of water at the works, as done at your furnace at present, in a more economical manner than if garbage, rubbish and ashes were at once mixed. In the latter case, the water is at once absorbed and only slowly evaporated, perhaps not until this is done by the fuel contained in the refuse, which should be utilized rather for maintaining the highest practicable degree of heat in the furnace.

Whether the collection is of garbage or of other refuse if the roads are good and if the collection is mainly down-hill, as in Milwaukee, it will be cheaper to have double teams with two men than single teams with one man. The tare weight of a double team wagon is not nearly twice that of a single team wagon, and the saving of weight can be utilized for an additional amount of refuse to be hauled by the same team. There is further economy in the fact that two men together can collect more rapidly than two men singly.

It is hardly necessary to state in this city that the collection of all classes of refuse is better done by city employees than by contract. There may be exceptional conditions where this is not so, but the exclusive custom in Europe and the experience of most of the best managed public works in our own country have amply indicated that, ordinarily, where a question of nuisance is concerned and where the convenience and comfort of the people is first considered, the contract system has, as a rule, not given the same degree of satisfaction as municipal operation.

Concerning the utilization of the heat in a cremator, Mr. Hering states:

From the examinations that have been made, it is safe to guarantee a pound of steam per pound of refuse during the fruit season, when the degree of moisture in the refuse is greatest, and 1 1-4 pounds of steam per pound of refuse in the winter, when the discarded coal in ashes is greatest. . . . The practicability of utilizing the resulting heat has been amply demonstrated by experience in many cities. It has been used to operate the plant, to furnish power for pumping, for repair shops, for breaking and grinding clinkers, and chiefly for driving dynamos for electric lighting.

He estimates the investment cost of plants as follows:

1. Reduction of 150 tons of garbage.....	\$225,000
Incineration of 100 tons of rubbish.....	89,000

Total for 250 tons refuse.....	\$314,000
2. Incineration of all refuse, 450 tons.....	307,000
3. Incineration of 300 tons.....	200,000

The operation costs, including interest and depreciation, are estimated as follows:

	Per Day	Per Ton
1. Reduction of 150 tons of garbage.....	\$55.00	\$37
Incineration of 100 tons of rubbish.....	37.73	.38

Total cost for 250 tons rubbish..	\$92.73	\$37
2. Incineration of all refuse, 450 tons.....	47.53	.11
3. Incineration of 300 tons of refuse.....	79.01	.26

From this summary it will be seen that the reduction project is the more expensive one. The larger of the two incineration works is cheaper per ton of material burned than the smaller one, due to the fact that practically no ashes would be hauled to the latter and therefore no value is derived from the heating power of the unburned coal contained therein, which is found to be considerable, but which could be utilized as the area of grate surface available at the plant would be increased.

NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

Wants Asphalt Paving Plant

Ardmore, Okla.—Mayor Dick advocates the purchase by the city of the asphalt paving plant belonging to a contractor and now in the city. As Ardmore is located near large asphalt beds, it is believed the streets would be paved at an unusually low price.

Paving Plant Works All Right

Fort Worth, Tex.—According to City Engineer Woodward, the asphalt paving plant is a success. A little trouble was experienced the first day. Material was made too hot in the beginning and then was not heated enough. The men soon accustomed themselves to their work and now Broadway is being paved at the rate of nearly 1,000 square yards a day.

Paving Records of Jersey City

Jersey City, N. J.—During the past year pavements paid by assessments were made as follows: Asphalt, 29,892 yards, costing \$70,692; Belgian block, 22,897 yards, costing \$54,608; macadam, 8,046 yards, costing \$19,379; Belgian blocks (in gutters), 1,551 yards, costing \$21,559. The total number of miles of streets in the city is 202, of which 121 are paved.

To Oil Sidewalks

San Leandro, Cal.—An ordinance providing for the application of crude oil to all unpaved sidewalks has been introduced in the Board of Town Trustees. The process was tried experimentally last summer and was so satisfactory that it is proposed to make it compulsory. The oil forms a crust on the walks, which, while not strong enough to carry teams, bears the traffic of pedestrians. There was some objection on the part of housewives, who complained that their carpets were injured, but it is thought that the absence of dust in summer and mud in winter compensates for this.

Small Granite Blocks Advocated

Springfield, O.—Randolph Coleman, who represents a paving company, recently appeared before Mayor W. R. Burnett and President David F. Snyder, of the City Council, to discuss the merits of granite blocks four inches deep for street paving. Views of this material as laid in Bay City, Mich., were shown. The material is said to make a paving much smoother than standard sizes of stone blocks and more durable and easy to repair than asphalt. The blocks are usually laid in grout with a gravel foundation. The city officials have promised that this material will be mentioned in the specifications for new paving work.

SEWERAGE AND SANITATION

Office of Bacteriologist Established

Chester, Pa.—At a meeting of the Finance Committee it was recommended that the sum of \$1,500 be appropriated for the Board of Health to pay the salary of a bacteriologist, a new city official. The principal duties of this officer will be to examine specimens of sputum, etc., from patients suspected of suffering from contagious diseases. Hitherto it has been necessary to have this work done in Philadelphia. The gain in promptness of diagnosis will prove a factor in averting the spread of disease.

Watchdog of the City's Health

Jersey City, N. J.—In appointing a Committee on Public Health, the Board of Trade has signified its intention of becoming the watchdog of the city's health. The committee will keep the Board of Health informed as to the health and sanitary condition of the city and will cooperate with it to secure desired legislation.

Sanitation Lectures to City Officials

Pittsburg, Pa.—Dr. J. F. Edwards, Superintendent of the Bureau of Health, has established a night school of sanitation and is delivering a number of valuable lectures on sanitation. The school is proving to be a great success. The lectures are attended by all the sanitary officers in the department, as well as any outsiders who desire to attend. After the lectures are completed, typewritten copies are distributed to all employees of the Bureau of Health.

Appropriation to Fight Tuberculosis

Rochester, N. Y.—A resolution introduced by Alderman Pavoir has been adopted, referring to the request of Governor Hughes to local authorities to co-operate with the State in its efforts to eradicate tuberculosis and recommending that the Board of Estimate and Apportionment include in the tax levy a sum sufficient to enable Rochester to perform its share of the work.

Regulating Sale of Milk

Washington, D. C.—Senator Gallinger has introduced a bill in Congress advocated by the Dairymen's Association of Maryland and Virginia regulating the sale of milk. A Board of Dairy Control is to be formed, consisting of a Superintendent of Dairy Products, who is to be a practical food chemist; the Secretary of Agriculture, or assistant appointed by him, and one other person, to be appointed by the Commissioners of the District, who shall have had experience in the milk business. Milk is to be considered as adulterated if it contains less than 3.5 per cent. of butter fat or less than 87.5 per cent. of water, or if it is unwholesome, or from cows fed on garbage, or if anything has been added to or removed from it. Fine or imprisonment for violations are provided.

WATER SUPPLY

Will Reduce Insurance Rates

Hoboken, N. J.—High rates for fire insurance and a way to reduce them were discussed at a meeting held by Mayor George Steil and several Councilmen with representatives of the Taxpayers' Association, Board of Trade and Realty Brokers. It was decided to recommend the laying of a 30-inch water main through the heart of the city, with intersecting connections at every cross street. The improvement will cost nearly \$100,000.

Lower Rates Wanted

Kittanning, Pa.—Citizens are up in arms against the Armstrong Water Company on account of a raise in rates, which were already considered as high. Preparations for a suit against the company are being made and a committee has been appointed to raise a fund of \$500.

Filtration Works Completed

Louisville, Ky.—The filters of the Louisville Water Works have been completed and clear water turned into the city mains. The works were designed by the late Charles Her-

many. They comprise two subsidence basins of 50,000,000 gallons capacity each, located at Crescent Hill, and clear water reservoir of 25,000,000 gallons capacity, for storing filtered water. Purification, accomplished through processes of coagulation and filtration, consists of removing from the water turbidity, color, organic matter and bacteria by means of various structures, vessels, devices, machines and appliances, which were described in the specifications in ninety-six paragraphs. After purification the water is forced into the mains under high pressure by pumps.

Will Meter Water for Government Buildings

Washington, D. C.—A recommendation that water meters be placed on service pipes supplying all government buildings has been made by W. A. McFarland, Superintendent of the Water Department. This will not only check the waste of water used in the buildings, but will allow the Commissioners to state with authority the amount of water used by the Federal government as well as by the city. The work will cost about \$7,000.

Must Increase Water Supply

West Seneca, N. Y.—Unless conditions are improved this thriving town will be without fire protection from insurance companies. The water supply failed at the fire which destroyed the St. John's Protectors trade school a few weeks ago and caused a loss of \$100,000. Since then the insurance companies have been putting off a settlement, and some of them are inclined to fight because the water force was not up to the standard.

STREET LIGHTING AND ELECTRIC POWER

Municipal Conduits

Baltimore, Md.—During 1907 the receipts from rentals for use of space in subways amounted to \$93,371, against which must be charged interest on loans amounting to \$75,000 and operating expenses of \$8,537, leaving a net revenue of \$14,834. Altogether the city now owns 95 miles of subways, with a total length of single ducts of 1,282 miles. The cost of construction so far has been \$1,800,000. There is still available for extension \$200,000 of loans already authorized, and a new loan of \$1,000,000 will be asked. The original subway act provided that one cent in the tax rate should be set aside for sinking funds; last year this amounted to \$34,787, so that funds will be available for extinguishing the loan long before the bonds become due.

Prepayment Meters Dangerous

East Orange, N. J.—A resolution directing the City Clerk to notify the Gas Department of the Public Service Corporation to discontinue the use of coin slot meters was introduced in the City Council by John Lenord Merrill. There are a large number of the meters in use in East Orange, and Mr. Merrill declared they had been proven dangerous and spoke of several deaths that had been occasioned by their use of late. The resolution has the full support of Council.

To Seal Meters

St. Paul, Minn.—An ordinance has been introduced in Council providing that all gas meters placed in houses shall be tested by the gas inspectors and sealed with an efficient seal. The testing will be free. It will be a misdemeanor to remove an official seal or put a seal on an untested meter.

Second to Niagara

Tacoma, Wash.—An electric power plant, second only to Niagara, will be developed at Lake Tapps, eleven miles from Tacoma. At an expense of \$10,000,000, it is intended by a company organized by Stone & Webster, of Boston, Mass., to develop 100,000 horse-power. The White River will be diverted and the water carried by canal into Lake Tapps, situated on the mountain side. From this point it will fall 500

feet at an angle of 45 degrees, driving Pelton wheels in the power houses below. The project originated about fifteen years ago with E. H. McHenry, then Assistant Chief Engineer of the Northern Pacific Railway.

Municipal Gas and Electric Plants

Fort Worth, Tex.—At a meeting of the City Commission a preliminary plan for establishing a municipal gas plant was explained by Commissioner Sam Davidson and received favorable consideration. Mr. Davidson figures that for \$300,000 a plant could be built larger than the city now needs. With gas at \$1 per 1,000 feet, it is figured that the plant would be self-sustaining in two years and provide funds for paying off the debt gradually. In the meantime, to supply the demand for lights, the electric plant will be improved so as to furnish current for street lighting and public buildings and later on for commercial purposes.

FIRE AND POLICE

Good Fire Record

Bangor, Me.—According to the report of Chief Engineer W. S. Mason, of the Bangor Fire Department, the total fire loss in the city for the year 1907 amounts to \$26,241, about half the average loss for a city of 25,000 inhabitants. The value of property involved in the fires was \$439,450. The total number of alarms for the year was 144, of which six were false and two were out-of-town calls. Of the fires, 17 were in brick or stone buildings, 94 in wooden buildings, and 27 were other than building fires.

Politics in the Fire Department

Boston, Mass.—According to the report of the Finance Commission, during the past two years the Fire Department has fallen under the malign influence of politics. Extravagance and favoritism have been the besetting sins. The Mayor has frequently named appointees; two inexperienced men were placed in charge of a carefully devised system of accounts; the civil service law has been evaded; supplies have been bought without competition; the cost of horseshoeing has been excessive; the "one-day-off-in-five" system is responsible for a deficit of \$40,000 and should be carefully reconsidered; call men should be dispensed with; the probation period should be extended; the habits of the men should be watched and the morally weak weeded out. Economy and merit should be the aims of the future.

Central Control of Water Valves

Buffalo, N. Y.—In connection with the consideration of the question as to whether the city shall install a system of controlling the valves to all the water mains by a central switchboard, the Board of Councilmen wants to know whether the fire insurance companies will make a general reduction of rates. The cost of this system is \$175,000, bid by the A. P. Smith Manufacturing Company, of Newark, N. J. At the present time, if there is a big fire downtown, four or five hours may be taken in locating valves and adjusting them so as to divert the supply into mains where they are needed. In the case of a break in a big main the central system of control would be effective in preventing damage and saving water.

Alarm Required for Fire Pressure

Evansville, Ind.—An investigation into the failure of the water works officials to give fire pressure when requested by Fire Chief Dunlevy at a recent fire will be made by the Mayor. After running a line of hose three-quarters of a mile long, a patrolman was dispatched by the Chief to telephone, in his name, for fire pressure. The attendant at the water works refused to turn on the pressure because there had been no alarm. A man had to be dispatched to turn in an alarm, and in this way ten minutes' time was lost.

Will Reduce Detective Force

Lexington, Ky.—An ordinance has been passed reducing the detective force from eight to four men and a Chief. Mayor Skain recommended in his message that the department be abolished entirely, but the Police and Fire Committee was satisfied to make a reduction at the present time.

Building Inspection to Prevent Fires

Montreal, Canada.—Inspection of buildings with a view to prevent fires has begun by order of Chief Benoit, in accordance with the provisions of a by-law. Officers of the Fire Department are given authority by this law to enter public buildings, industrial establishments, and the like, to see that explosive compounds, shavings, rubbish and other materials, articles, goods or merchandise liable to cause fire are removed. It is also made unlawful for any person to pile up merchandise, goods, etc., so as to block windows and doors.

Condition of New York Fire Department

New York, N. Y.—The Commissioner of Accounts has sent to the Mayor a preliminary report of the investigation into the conditions of the Fire Department, brought about by the burning of the Parker Building. The report absolves the Water Department from blame, says that the water pressure was normal for that district, and blames Deputy Chief John Binns for poor distribution of engines, in that he allowed too many engines to attach to hydrants on small mains. The Deputy Chief is also blamed because he did not order his men out of the building when it was evident that they were doing little good, and for failure to ascertain that there was heavy machinery on the upper floors likely to break through, as it did. Fire Commissioner Lantry, however, comes in for the chief blame in that he did not spend unappropriated balances for hose or impress on the Board of Estimate that the city needed special appropriation for new hose and was in grave danger from lack of hose. The report points to many instances in which Chief Croker drew the attention of the Commissioner to the need of hose. It is also charged that the several Fire Commissioners never enforced the guarantee clause in the contracts with the hose manufacturers. The recommendation is made that all hose over three years of age be tested as soon as a new supply is obtained, and that all hose condemned or over six years of age be disposed of.

Mayor Wants Police Sergeants

Portland, Ore.—Mayor Lane has appealed to the City Council to pass an ordinance creating the office of Sergeant of Police. He says that the patrolmen cannot be properly handled without such officers. The duties of the Sergeant should be to keep track of the men when they are out on their beats and see that they are attending to their duties.

New Form of Fire Insurance Policy

Racine, Wis.—Hitherto it has been the custom to distribute the municipal fire insurance among the various agents of the city, each one of whom issued a separate policy for his share of the insurance on each building. Now the plan devised by City Clerk Armstrong is to have each agent issue one policy, which is in blanket form, and covers all the insurance he or his companies hold on all city buildings. Attached to the policy is an appendix setting forth in detail the various amounts held by each agent on the different buildings.

Police Merit System

Troy, N. Y.—Superintendent of Police Kirkpatrick has distributed material to be worn by members of the Department as insignia of meritorious service. Captains will wear gold bands on each coat sleeve, one for each five years of service. Sergeants, in addition to the blue stripe for each five years, will wear on each arm three blue stripes with white edge. The patrolman's decoration will be plain blue bands, one for each five years.

GOVERNMENT AND FINANCE

Economical Census

Alliance, O.—The Board of Public Service, in accordance with an ordinance, has negotiated a contract for taking a census of the city for the sum of twenty-five dollars. An agreement was made with a firm desiring to make a directory of the city by which its representatives will have the advantage of working in a semi-official capacity, and the city will profit by the low price.

Municipal Color Line

Oxford, Ala.—A case has been filed in the Anniston City Court, at Anniston, testing the constitutionality of the law passed by the Legislature annexing Hobson City to Oxford. Hobson City was incorporated a few years ago and was the only town in Alabama which had a negro Mayor and city officials. By merging Hobson City with Oxford the negro officials of the former city were ousted.

New Municipal Code Bill

Columbus, O.—A bill amending the Ohio Municipal Code has been introduced in the Legislature by Representative L. H. Paine, of Toledo. The bill abolishes the Board of Public Service and the Board of Public Safety. The authority of these boards is vested in a Director of Public Service and a Director of Public Safety, to be appointed by the Mayor, removable at his option, and not subject to confirmation by Council. The bill makes the Mayor almost absolutely responsible for the executive departments of the city. The Board of Control, consisting of the Mayor and Director of Public Service and Director of Public Safety, must pass on all contracts amounting to \$500. A Municipal Civil Service Commission of three members, appointed by the President of the Board of Education, President of Council and President of the Board of Sinking Fund Trustees, is also created. The bill is the work of a sub-committee consisting of Representatives Paine, of Lucas County; Lersch, of Lorain; Stockwell, of Cuyahoga; Braun, of Franklin, and Schueler, of Montgomery.

Public Utilities Law for Maryland

Easton, Md.—Mayor Martin M. Higgins advocates a Public Utilities Law for Maryland, and invites correspondence with governing bodies of all towns in the State for the purpose of securing organized effort to that end. The Mayor writes that as a result of his two years' experience in office he has become convinced that only by giving publicity to the affairs of public service corporations and by the assistance of the higher power of the State may the people be protected from extortion in the form of excessive prices, poor service, poor equipment and fictitious capitalization.

Finance Commission for Haverhill

Haverhill, Mass.—The City Council Finance Committee has decided to follow the lead of Boston in the appointment of a Finance Commission. There is only \$327,588 available by taxation this year for the current expenses, that will aggregate \$462,463, while a total of \$550,177 will have to be raised by taxes to meet all expenses. Three plans will be considered—strict economy, increased tax rate, and special legislative action for exemption from the \$12 limit for current expenses.

Variations in Bids and Estimates

Portland, Ore.—The rule hitherto followed by the Executive Board of awarding no contracts for improvements unless bids are within 10 per cent. of the estimate of the City Engineer may be revoked. It has been found to prevent a number of street improvements desired by the property owners. The fluctuations in cost of labor and materials within a period of a few weeks is the cause of variation in bids amounting to more than 10 per cent.

A Municipal Claim Agent

St. Paul, Minn.—The large sum of money paid annually to people who have been injured on defective sidewalks has led the city officials to authorize the Corporation Attorney to employ a Claim Agent at \$80 a month. During 1907 the sum of \$13,747 was paid, of which \$10,037 was for cases that originated and were settled during the year. Out of fifty-three claims for damages presented to the city thirty-nine were on account of defective sidewalks.

No Tax Sales in Portland

Portland, Ore.—Amendments to the tax law made by the last Legislature abolished tax sales. The practice now is to issue certificates of delinquency. When the taxes on any piece of property have not been paid by the owner they may be paid by the first person who applies, and to him is given the certificate of delinquency. This draws 15 per cent. interest, and may be redeemed at any time within three years by the owner. At the expiration of three years the holder of the certificate secures a deed through decree of the Circuit Court.

Municipal Advisory Board

Salem, Mass.—Mayor John F. Hurley has appointed an Advisory Municipal Board, whose duty it is to consider any special matter of importance referred by the City Council and report thereon. The Board may also suggest on its own account such action by the City Council as would tend to contribute to the welfare of the city. The board will be free and non-partisan and composed of public-spirited citizens, who will serve without compensation. They will meet when and where they like and be subject to no special interests or dictation.

City's Funds Earn Ten Thousand Dollars

Scranton, Pa.—City Treasurer F. L. Hitchcock in his report to Mayor J. Benjamin Dimmick states that the city received from banks as interest on city deposits the sum of \$10,534. The treasury is in excellent condition, with a balance on hand of \$634,370 at the beginning of the year.

REFUSE COLLECTION AND DISPOSAL

Municipal vs. Private Garbage Collections

San Francisco, Cal.—The collection and disposal of garbage by the city was discussed at a conference of the Health Committee of the Board of Supervisors with the representatives of the Scavengers' Union and a number of civic societies. Chairman Pavot of the committee advocates municipal collections on general sanitary grounds, and especially in order to do away with the danger of dumping garbage in vacant lots, where it may spread disease by means of rats or otherwise. The President of the Scavengers' Union said that the municipal function should consist in furnishing free incineration and enforcing proper regulations. Looking at the financial side, he said that whereas 145 wagons, at an average expense of \$8, now perform the work, the city would require at least 200 wagons, costing \$10 a day each. With other expenses, he figured it would cost the city \$100,000 a month, as compared with \$34,000 now paid by citizens. At the close of the conference the city officials seemed still of the opinion that the sanitary consideration was the controlling one and that municipal collection would be worth the additional expense.

District Gives Up Ash Collecting

Washington, D. C.—The contract for collecting ashes from private dwellings and apartment houses of a certain size has been awarded to the Pollock Drayage Company, whose bid of \$66,000 was the lowest of eight bids recently received. The contract calls for a term of two years, with two collections each week. The District has been doing its own ash collecting since last October, when the lowest bid received for the work was \$79,000.

Garbage Cremation Started

Seattle, Wash.—Garbage incinerator No. 1, situated on the south shore of Lake Union, was put in commission January 27. The operation of the plant is in charge of a representative of Meldrum Brothers, of Manchester, England, patentees of the destructor. The furnaces, lighted several weeks ago, showed a temperature the first day of 1200 to 1400 degrees, which will be gradually increased to the maximum of 2200. Three men are now operating the plant; later each of these men will be a foreman in charge of a shift of three men working eight hours. The capacity of the plant will be sixty tons every twenty-four hours. This is only one-third of the garbage handled in Greater Seattle. The balance will be burned in other incinerators in different localities as they are put in operation.

Sprinkling Carts vs. Cars

Waterbury, Conn.—Superintendent E. G. Kilduff reports to the Board of Public Works that although the use of the sprinkling car is the ideal way of taking care of streets that are double-tracked, nevertheless he believes that five carts can do this work more economically under local conditions than a single car costing \$100 a week. He estimates the capacity of a cart as about two and a half miles of streets per day, allowing the streets to be gone over about four times each day.

Ashes Scattered by Collectors or Ragpickers

West Hoboken, N. J.—Complaints about the way ashes and garbage are thrown about the streets by collectors were made at a meeting of the Board of Council by Street Foreman Joseph McCartney. The contractor, Antonio Padarano, stated that a large part of the refuse that appears to be scattered by his men is in reality dropped by ragpickers, who search the barrels on the streets before his men get to them. This, he said, the police should prevent, as his men could hardly be expected to pick up refuse from the ground.

Street Cleaning by City

Wilkes-Barre, Pa.—A street cleaning ordinance providing that the paved streets of the city be cleaned under the direction of the city and the work paid for out of Street Committee appropriation has passed a final reading. There was considerable objection to the measure, based on the claim that it is unfair to pay for the cleaning of streets out of general funds.

PARKS AND CITY BEAUTY

Civic Centers

Milwaukee, Wis.—Plans for two civic centers, one on the east and one on the west side, have been prepared by Park Commissioner A. C. Clas. The east side scheme provides a parkway running from the City Hall between Oneida and Biddle streets to St. John's Cathedral, on Jackson street. Along this parkway are to be located all city and county buildings. The west side center is designed with the new Auditorium as a base. The territory lying between Prairie street and Grand avenue on the north and south and Fourth and Sixth streets on the east and west lies nearly central in the city. At present values it could be acquired for about \$1,500,000, allowing \$500 a front foot as the prevailing price. Mr. Clas proposes that the city and county unite in the project and issue fifty-year bonds to defray the cost of land and buildings. Mr. Clas argues that if Milwaukee begins the movement now it will not be put to the enormous expense that Cleveland, St. Louis and other cities are now facing.

Decide on a \$50,000 Park

Minneapolis, Minn.—The Board of Park Commissioners has decided to acquire Lake Amelia and the land surrounding it in South Minneapolis. About fifty acres of land will be pur-

chased on a ten-year certificate plan, the assessments to be made over a wide area. A boulevard around the lake and spacious picnic grounds are provided, a bathing beach may also be laid out, and room for playground apparatus for children will be set aside. A drive will probably be built between Minnehaha and Lake Amelia.

Private Park to Be Acquired by City

Seattle, Wash.—A proposal that the city purchase Ravenna Park and turn it into a public pleasure ground has been submitted to the Chamber of Commerce by W. W. Beck, who has the management of the park. The offer followed the introduction of an ordinance in Council extending Twentieth avenue northeast through the park, and the association, believing that the reservation should be preserved, is willing to sell it to the city for \$100,000.

Billboards Prohibited

Utica, N. Y.—An ordinance has been passed prohibiting the erection of any billboard more than six feet in height without permission of the City Council. Any person desiring to erect a billboard more than six feet high shall notify the occupants or agents of all houses and lots within a distance of 200 feet of the proposed location concerning his intentions. No application will be considered unless the Common Council has evidence that such notice has been received. A fine of \$25 or imprisonment for twenty-five days will be imposed for violations of the ordinance.

Proposed Improvements to Pennsylvania Avenue

Washington, D. C.—A large drawing, 25 feet long, mounted on heavy cardboard, showing the proposed development of the south side of Pennsylvania avenue, as proposed by a bill introduced by Senator Heyburn of Idaho, is on exhibition in the cloak room of the Senate. Nine public buildings are shown extending from the Capitol to the White lot and facing Pennsylvania avenue. Numerous statues and many trees to set off the architecture are shown. What is intended to be the central and most ornate of the structures, is at a point near the intersection of Ninth street and the Avenue.

RAPID TRANSIT

Arcade to Facilitate Traffic

Hoboken, N. J.—In order to relieve the congestion of traffic in Newark street, which is quite narrow, the Public Service Corporation has purchased properties on Washington and Hudson streets with a view to building an arcade on the two lots, through which the trolley cars will run instead of through Newark street. The change in route will benefit the city as well as the company.

Arrangements for Opening Jersey Tunnels

New York, N. Y.—President Roosevelt will touch the button that will put the Hudson River tunnel system into active operation on Tuesday, Feb. 25, and Governor Hughes of New York and Governor Fort of New Jersey, with city and State officials, will start from their respective States at the same time through the same tube, meeting on the State line, at which point the tunnel will be lined with bunting. Then will follow greetings between the Governors, which will be a feature of the opening day's exercises. At night at Sherry's an elaborate dinner will be given at which State and municipal officials of New Jersey and New York will take a prominent part. On the following day cars will run regularly between Hoboken and Nineteenth street and Sixth avenue, New York. Eight-car trains will be run and the time of transit will be 12 minutes, although it is said the trip can be made in seven minutes.

Flat Wheel Cars Must Go

Racine, Wis.—A resolution proposed by Alderman Davies has been adopted by the Common Council asking that the street car company be ordered to remove from its interurban cars all flat wheels.

Municipal Railroad Wanted

Los Angeles, Cal.—A petition has been presented to the City Council by former Councilman A. D. Houghton requesting that a bond election be called to pass on the issue of \$1,000,000 bonds for the construction of a municipal railroad between Los Angeles and San Pedro.

Extension of Trolley Express

Taunton, Mass.—A round-trip express service is now in operation between Taunton and Fall River on the lines of the Old Colony Street Railway Company. This company has now received the rights and franchises to operate the trolley express in twenty-four cities and towns in southeastern Massachusetts, and it is already operating in sixteen of them.

MISCELLANEOUS

Errors in House Numbers and Street Names

Fort Worth, Tex.—The engineering force engaged in renumbering residences and street names has found thousands of houses incorrectly numbered and twenty-five or thirty streets that will have to be renamed. Changes in street names are necessary for several reasons. Instances are found where two streets have the same name. Besides there are continuations of streets having different names and offsets in a street sufficiently marked to make the continuation a separate street.

Clubs and Drug Stores Under Ban

Huntsville, Ala.—Mayor Smith has issued orders to the effect that in future drug stores shall sell nothing on Sunday except drugs. Managers of clubs where liquors are sold on Sundays have been notified that they will be arrested for making such sales. Mayor Smith says that Huntsville is going to be cleaned up and made a moral town.

Municipal Jurisdiction in Two States

St. Louis Mo.—The next map of St. Louis to be drawn by the city map-makers as soon as the surveys for the free bridge across the Mississippi are completed will show the city in two States, its territory extending across the river at the bridge site and including the east bridge approach extending to the edge of East St. Louis. While the territory to be occupied by the bridge approaches in Illinois will really be a part of St. Louis as soon as the site for the bridge is approved by the War Department, it will not actually belong to the city until after the ground has been condemned.

Labor Union Secures Contract

Spokane, Wash.—Federal Labor Union No. 11,624, through Thomas Maloney, its business agent, has for some time past been submitting bids on sewer work, and has secured the contract for constructing the sewer in Ninth avenue, from Monroe to Maple street, for \$3,184. The Engineer's estimate was \$3,808.40, while the bids submitted by private concerns ranged from \$4,700 to \$7,037. Mayor William Hickman Moore expressed his pleasure that the union secured the contract and said he had no doubt the work would be completed in a creditable manner. "It appears," said Mayor Moore, "that organized labor realizes one of its main ambitions in maintaining equity of prices. I would like to see the union stay in the contracting business, as it cannot help but redound to the benefit of the city." Mr. Maloney said the union had no desire to branch out into the contracting business as long as the wage scales are maintained, but, in self-protection, they were forced to take the action to thwart the cutting of wages.

Insanitary Buildings Demolished

Washington, D. C.—The Board for Condemnation of Insanitary Buildings has, during the last month, condemned and removed thirty-six dwellings in the District, the largest number ever removed in one month. Twenty-four of these houses were in streets and twelve in alleys. Altogether 136 buildings have been removed during the past year.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

HIGHWAY CROSSED BY RAILROAD

Cammett vs. City of Haverhill.—Under the Revised Laws providing that highways shall be kept in repair at the expense of the municipality in which they are situated, and limiting the liability of municipalities for accidents to cases in which the dangerous condition could have been remedied by their reasonable care, and defining the liability of a street railway for defects in streets occupied by its tracks, a municipality is liable for a defective condition of a street between the tracks of a street railroad, unless it shows that the construction and condition of the tracks are proper and necessary to the operation of the railway, and if they are improper and unnecessary, either as to the original construction or later condition, the municipality is liable for an accident to a traveler, though it has a remedy against the railroad.—Supreme Judicial Court of Massachusetts.

PRIVATE PROPERTY FOR PUBLIC USE

Consolidated Gas Co. vs. City of New York.—The Greater New York Charter, Laws of 1901, providing that, where a part only of the property of a riparian proprietor is taken for water front improvement, the difference between the value of the entire premises and the value of the premises as they will be after the part is taken shall constitute the measure of compensation, considered as an exercise of the power of eminent domain, is violative of the Constitution, requiring that private property shall not be taken for public use without just compensation.—Court of Appeals of New York.

CONSTRUCTION OF CONTRACT—EXTRA WORK

Roemheld et al. vs. City of Chicago.—Where a contract with a municipality for a public improvement provided for alterations increasing or diminishing the expense of the work, the value to be determined by the Commissioner of Public Works and added to or deducted from the contract price, extra work made necessary by a change in the original plans or specifications was not within an ordinance and provision of the contract that extra work not specified in the contract could not be recovered for unless done on the written order of the Commissioner of Public Works, to be annexed to the contract stating that the work was not included therein, etc., as such provision related only to extra work not specified in the contract, which became necessary in the course of the improvement for the proper completion of or for the security of work previously done.—Supreme Court of Illinois.

CONTRACT PREMATURELY MADE

People ex rel. Lehigh Valley Ry. Co. and Buffalo Creek R. Co. vs. City of Buffalo.—A contract involving over \$25,000 for the dredging of the Buffalo ship canal was drawn September 27, 1906, on which date it was signed and acknowledged by the contractor. The contractor's bond was executed on the same day and the contract was approved by the Corporation Counsel on the following day, by the Comptroller on the 29th, and by the Bureau of Engineering on October 9, 1906. Immediately thereafter the contractor began the work, which was prosecuted under the inspection of the city's officers, though the contract was not signed by the Commissioner of Public Works until July 6, 1907. An assessment roll taxing one-half of the cost of the work against property benefited was filed February 25, 1907, and confirmed July 2 following. Held, that the contract was prematurely entered into, in violation of Buffalo City Charter, providing that no contract for any improvement costing more than \$500 shall be entered into until the assessment therefor shall have been made, confirmed, and delivered to the Treasurer, and that such assessment was, therefore, subject to attack in a proper proceeding.—New York Supreme Court.

DEFECTIVE SIDEWALK

Wallace vs. City of Farmington.—The use of a defective sidewalk by one having knowledge of the defect is not negligence *per se*, and if, while walking thereon, he exercises care, he may recover in case of injury.—Supreme Court of Illinois.

SIGNS—BUILDING REGULATIONS

City of New York vs. O. J. Gude Co.—The fact that a municipal ordinance, regulating the height of any sky signs, is unreasonable and void, does not justify the erection of any height of sky sign without the permit required for a sky sign by the ordinance; but a party may apply for a permit, asking that the Superintendent of Buildings determine whether or not the proposed sky sign is properly constructed, and may enforce the performance of that duty by mandamus. Consolidation Act, as amended by Laws 1892, authorizes the Superintendent of Buildings to institute any appropriate action or proceeding at law or in equity to restrain the erection of any building or structure in violation of the provisions of the title. Building Code of City of New York, re-enacts this provision, using its identical language. Held, that section 506 of the Consolidation Act is still in force, and that under it the Superintendent of Buildings is authorized to institute any appropriate action or proceeding at law or in equity to restrain the erection of any building or structure not complying with any of the provisions of the Building Code; but it does not authorize the court to require a structure to be removed, on a petition of the Superintendent of Buildings, by an order based on an affidavit that the structure has been erected in violation of the Building Code, without giving opportunity to meet the testimony except by affidavit.—Supreme Court of New York, Appellate Division.

SKY SIGN A STRUCTURE

City of New York vs. M. Wineburgh Advertising Company.—First Greater New York Charter provided that the municipal assembly shall have power to establish a code of ordinances, known as the "Building Code," relating to the construction of buildings or structures erected in New York City. In pursuance of this section, the Common Council, in 1899, adopted a Building Code regulating the erection of buildings and structures. Held, that a sky sign erected on the roof of a building for the purpose of advertising is a "structure" within the meaning of the statutes and ordinances, and hence subject to control thereby.—Supreme Court of New York, Appellate Division.

LIABILITY OF SURETY—ILLEGAL CONTRACT

National Surety Co. of New York vs. Wyandotte Coal and Lime Co.—While one who furnishes material to a contractor with a city to carry out a paving contract, fraudulently procured and which is illegal, having knowledge of the fraud and illegality, is barred from recovering from the surety of the contractor for the material furnished, he is not, as between himself and the surety company, bound or barred by mere constructive notice of such fraud or illegality. The knowledge which binds him must be actual, and so ample that, in furnishing material in furtherance of the unlawful contract, he can be regarded as an active agent in promoting the fraud and illegality.—Supreme Court of Kansas.

OBSTRUCTION ON SIDEWALK—LIGHT

White vs. City of Newberne.—A city cannot escape liability for injury to a pedestrian, who, while exercising due care, strikes steps negligently permitted to project upon a sidewalk, because for many years property owners have been permitted to so project their steps. Where an obstruction has remained upon a sidewalk for thirty years, it must be presumed the city authorities knew of its existence. A city not being liable absolutely for injuries caused by a defective sidewalk, and only bound to provide a reasonably safe way, and liable only for negligence, the mere existence of a defect does not show a cause of action for an injury, but notice of the defect, and power to remedy, and neglect to do so, must be shown. In the absence of statutory requirement, a city need not light its streets, and, where a city does so, the character of the lighting rests largely within the authorities' discretion, and, in an action for injury caused by a defective sidewalk at night, that the street was defectively lighted does not of itself show negligence, but is only evidence on the principal question whether, at the time and place of the injury, the sidewalk was reasonably safe.—Supreme Court of North Carolina.

OBSTRUCTION ON SIDEWALK—SNOW

Bowen vs. City of Detroit.—Evidence, in an action for injury to a pedestrian from slipping while going over a street at the crossing, held sufficient to go to the jury on the question of there having been an obstruction on the crossing from snow and ice thrown out from a trench by the city employees, who cleared the crossing and dug the trench along the curb between catch-basins.—Supreme Court of Michigan.

MUNICIPAL APPLIANCES

Weber Subterranean Pump

THE Weber Subterranean Pump is a device for delivering water from deep wells by the direct pressure of air on top of the column of water. The water is forced down in the pump and out of the casing by an ordinary ball valve through the discharge pipe in one lift to the required height. In detail, air from the compressor is transmitted through the pipe, K, to both the upper, E, and the lower, F, packings. The packing is forced against the inside of the well casing and the ends of the annular chamber, M, between the cap, A, and the lower ball case, C. Air entering this chamber through the pipe, L, forces the water through the inner discharge tube to the cap, A, from which it is forced out through the casing. When the water in the chamber is nearly expelled, the reversing valve operates so that the pipe, L, and the chamber, M, are under suction instead of compression. Water enters the chamber through the lower ball valve. The reversing valve is operated by pressure when the water reaches the point, X. In the compression-suction line and between the compression and reversing valve is the poppet relief valve, I. It supplies air lost through leakage, or an insufficiency arising from any cause. The connection between the air receiver and the reversing valve is indicated at N. When several wells are operated the discharges unite in one main at J. Under ordinary conditions, the ball valves

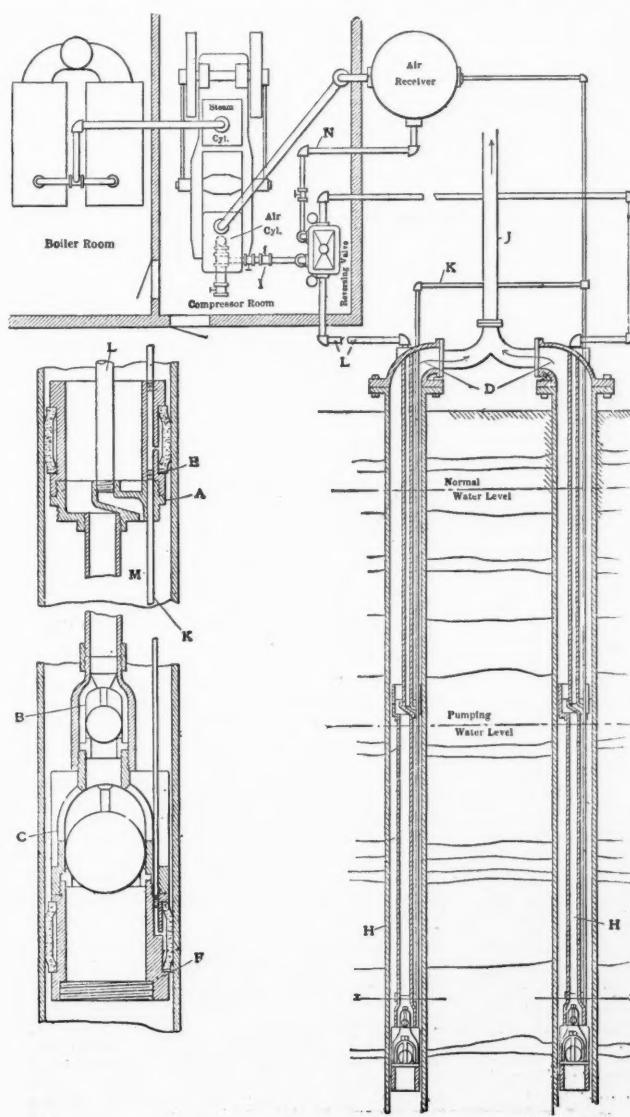
will operate every twenty or thirty seconds. Where the well casing does not reach below water line an inner tube is used for the intake chamber, and packings are dispensed with. The air exhausted from the well is returned to the compressor instead of to the atmosphere, thus saving a large part of the work of compression, and it is this that constitutes the most novel feature of the pump. By the use of this apparatus, the cost of pumping is said to be reduced to a very low figure, while the cost of maintenance does not exceed that of an ordinary air lift. The pump is manufactured by the George S. Samson Co., 13 Pearl street, Boston, Mass.

Traction Engines

THE demand for traction engines is increasing owing to the saving in the cost of hauling amounting to from 25 to 50 per cent. as compared with the work of horses, the economy being greatest in the case of long hauls. The Avery Manufacturing Company of Peoria, Ill., is meeting this demand with an undermounted double cylinder locomotive traction engine which aims to excel in durability, power, ease of handling and speed. Durability is secured by placing the engine on a separate frame instead of placing it on the boiler, where the effect of strains would show by loosening rivets and bolts. Power is secured by transmission in a horizontal line instead of pulling down from the top of a boiler. The low position of the engine makes it easily accessible for oiling and adjustment. A screw guide shaft eliminates slackness of the old style chain, and secures ease and steadiness in handling. A simple steam steering gear guides the machine, the engineer simply turning a wheel to right or left without effort. The Avery traction engine has two speeds, one rate being $2\frac{1}{2}$ to 3 miles an hour, the other $3\frac{1}{2}$ to 4 miles.

Combined Sanitary Street Cleaner

A STREET cleaner is made by the Briggs Labor Saving Specialty Company, Waterloo, Iowa, which sprinkles the pavement lightly, sweeps the dust ahead of the broom, and gathers it in a receptacle. Although the combination is new, the separate features are old. The sprinkler is controlled by a lever operated by the driver. A tank under the driver's seat and back of it holds about three barrels of water, an amount sufficient for a light sprinkling of about ten ordinary city blocks. The broom sweeps the dust into a pan in front having a capacity of about half a cubic yard. When full, the driver moves a lever raising the brush and throwing it out of action, then dumps the pan in a convenient place, and proceeds. The actual dumping of the pan is accomplished by turning a crank which raises the front of the dust pan to a point where the sweepings will slide out. The machine is made in two sizes, operating five and seven foot brooms, respectively, one machine weighing 3,000, the other 3,300 pounds.



DEEP WELL PUMP



SELF-LOADING STREET SWEEPER AND SPRINKLER

NEWS OF THE SOCIETIES

Association of Mayors of Second Class Cities of Kentucky.—A number of Mayors met at Frankfort, January 29, to consider legislation affecting the interests of their municipalities. Present were: Mayors Skain, of Lexington; Smith, of Paducah; Craig, of Covington; City Solicitors Campbell, of Paducah; Shepherd, of Covington. The Mayors agreed that a bill applying the revenues of Police Courts to other needs than public libraries ought to pass and also took favorable action on the bill providing for the extension of the jurisdiction of Police Courts to petit larceny and vagrancy cases up to \$200 fines. The House Municipalities Committee has approved the Klair bill providing police pensions at the option of the Council for second class cities, and the Applegate bill to permit second class cities to furnish water supply to neighboring towns. The Revenue and Tax Committee approved the Arnett bill exempting residents of this State from taxation on property owned in other States. A measure was also approved providing for a license of \$100 to \$1,000 for saloons and the other for a police force of from fifteen to seventy-five men. These measures are especially desired in Paducah, and it is probable that if they are enacted the saloon license there will be raised to \$500 and the police force reduced to twenty-five men.

The Engineers' Club of Philadelphia.—At the regular meeting of the club on the evening of February 1, a paper was read by Joseph W. Hunter, Pennsylvania State Highway Commissioner, on "Engineering Problems in Road Construction." The office which he holds was created by an act of Legislature, April 13, 1903. The act appropriated \$6,500,000 to be expended in six years in the improvement of State roads. Mr. Hunter's paper dealt with some of the difficulties met and overcome by him in organizing and carrying out the stupendous problems he has had to deal with.

Canadian Society of Engineers.—The annual meeting was held in Montreal, January 28-30, over 200 of the 2,000 members of the society being present. The increase in the membership last year, 400, eclipsed all previous records. The address of the retiring President, W. McLea Walbank, of Montreal, was on the subject of municipal ownership. He declared that the expenses of Glasgow and other British cities was not a safe guide on this side of the Atlantic. The best remedy for the evils of monopoly of public utilities was a commission similar to the present Canadian Railway Commission. An interesting feature of the meeting was an exhibit of lantern slides of the Quebec bridge, given by Henry Holgate, Chairman of the Investigating Commission. A banquet was given at the Windsor Hotel, at which Mr. Walbank was in the chair, and Charles Macdonald, President of the American Society of Civil Engineers, sat at his right. Mr. Macdonald responded to the toast, "Our Guest," saying that a glorious future awaited the engineering profession in Canada. The 20th century belonged to Canada, and when it was closed the engineer would be found to have been a momentous factor in the nation's development. Mr. Kilburn spoke of the results to accrue from the Trent Canal from Georgian Bay to

Quinte, which would shorten the journey for grain to Liverpool by 500 miles. He also spoke of the boundless hydraulic powers of Canada waiting development. Mr. Dubre, Secretary of the Montreal Street Railway, extended the invitation of his company to the members to visit the new power house, which he said was one of the most complete on the continent, if not in the world. The officers elected for the coming year were: President, Dr. J. Galbraith, Toronto; Vice-presidents, W. F. Pye, Montreal; H. M. MacLeod, Winnepeg, and C. H. Duggan, Sidney.

American Civic Federation.—The officers of the Federation presented to President Roosevelt, January 30, a plan for the preservation of the scenic beauty of Niagara Falls. The scheme is to line the river on either side by a grove of trees, and to remove all power plants and factories to the background. The Burton Act, limiting the amount of electricity which may be generated by a division of the water of the river, it is proposed to renew for a period of ten years. The presentation was made by J. Horace McFarland, C. R. Woodruff and William B. Howland.

Washington Society of Engineers.—At the meeting, February 4, at Rauscher's, Snowden Ashford, Building Inspector of the District of Columbia, discussed changes in the local building regulations now being considered by a Commission. The fundamental principle of building regulations, the speaker remarked, is to require a form of construction that will afford reasonable safety to life and limb, and must extend to the health and comfort of the public in so far as the structures affect the physical condition of the occupants. One of the subjects taken up by the committee is in regard to the centralization of authority in the Building Inspector. At present, Mr. Ashford said, there are indefinite lines of demarcation between the duties of the Inspector of Buildings, Electrical Engineer, Plumbing Inspector and Health Officer. That all notices regarding buildings shall issue from the Building Department, it was stated, will be a recommendation. It is also proposed, Mr. Ashford said, to establish a committee on appeals from the decisions of the Inspector of Buildings between the latter and the Commissioners. It will also be suggested that the Assistant Inspectors of Buildings, as well as the Inspector, be put under bond for the faithful performance of their duties. Under the suggested regulations the requirements as to permits will be enlarged so as to cover all forms of construction, and it will be suggested that permits be required to convert a building authorized for one purpose to that of another. This is regarded as important because the old residential section is fast changing into a section of office buildings. The Revision Committee will recommend, it was also stated, that fees be charged with a view to making the office self-sustaining. This would make a fee of about \$6 for the average house. The subject of light and ventilation, it was explained, has received much attention by the committee, and it will be proposed to regulate the spaces reserved for light and ventilation with reference to the public spaces on which they abut. The height of a building, it was explained, will not only depend on the width of the street or road at its front, but also on

the size of alleys, yards and courts, so that the height of a building will bear a stated relation to the depth of the yard or width of a court, thus allowing sunshine to penetrate such spaces for at least two-thirds of the day. The present law regulating the height of buildings will not be radically changed, it was stated. Mr. Ashford explained that he thinks it is better to have a square solidly built up with moderately tall buildings than to have it partly built up with very tall buildings, from the lower stories of which the light would be shut out if the entire square was later built up with such tall buildings. Party walls, Mr. Ashford said, should not be less than thirteen inches thick. Such disasters as the Baltimore and the San Francisco fires would not have been possible, he thought, had the party walls been of that thickness. This was illustrated in a recent fire at Ninth street and Louisiana avenue, he said, where the fire spread to adjoining buildings through nine-inch party walls, but where the flames were halted when they reached a thirteen-inch party wall. Fireproof construction, Mr. Ashford pointed out, has received much attention from the committee, but the definite lines of regulation have not been formed. One of the greatest troubles in such construction, especially where concrete is used, is that the material is mixed and handled by inexperienced and unskilled persons. The only safe rule, it was explained, is to have this work done by experienced and responsible parties. Provisions for the registration or examination of builders, Mr. Ashford said, is the keynote of the situation. Responsible builders, he added, approve a law to license builders, but there is much opposition to such a regulation from other sources. The New York regulations, Mr. Ashford said, provide that an inspector shall be present to supervise the installation of all fireproof materials. The local theaters, it was asserted, are as safe as any in the country, and the new regulations will afford most ample means of exit and thus decrease the dangers of fires in halls and other places of assembly. On the principle that a standing audience occupies only one-third the space of a sitting audience, local theaters are required to have exits the total widths of which aggregate one-third of the width of the auditorium.

Calendar of Meetings

February 11-13.

Ohio Engineering Society.—Annual meeting, Great Southern Hotel, Columbus, O.—E. G. Bradbury, Secretary, 85 North High street, Columbus, O.

February 19.

American Society of Civil Engineers.—Regular meeting at the House of the Society, 220 West Fifty-seventh street, New York City.—Charles Warren Hunt, Secretary.

May 11-16.

American Water Works Association.—Twenty-eighth annual convention, Washington, D. C.—J. M. Diven, Secretary, 14 George street, Charleston, S. C.

June 23-26.

Society of Civil Engineers.—Annual convention, Denver, Col.—Charles Warren Hunt, Secretary, 220 West Fifty-seventh street, New York City.

June 23-27.

American Society for Testing Materials.—Annual meeting, Hotel Traymore, Atlantic City, N. J.—Theodore Marburg, Secretary, University of Pennsylvania, Philadelphia, Pa.

September 21-October 12.

National Association for the Study and Prevention of Tuberculosis.—International Congress, Washington, D. C.—Dr. Henry Barton Jacobs, Secretary, Baltimore, Md.—Dr. Joseph Walsh, Philadelphia, Pa. Special Secretary of the Committee on the International Congress.

PERSONALS

BATEMAN, WILLIAM M., Lexington, Ky., has been appointed Superintendent of Public Works by Mayor Skain to succeed W. A. Newman, and his bond has been filed.

BENSEL, JOHN A., M. Am. Soc. C. E., Dock Commissioner of New York city, has been appointed a Commissioner of the Board of Water Supply of the city and elected chairman of the body by the other two members; Mr. Bensel served the city for ten years in the Dock Department, from 1898-1906 as Chief Engineer and since 1906 as Dock Commissioner; he is a graduate of Stevens Institute.

BERRY, GEORGE W., member of the Board of Street and Water Commissioners of Jersey City, N. J., who had been ill nearly a year, passed away recently; aged 40 years.

BROWN, JAMES, City Clerk of McKeesport, Pa., has been re-elected by the joint Councils under the act passed by the last Legislature providing for the election of a City Clerk for four years at a salary of \$1,500 per annum.

DEKLIEST, EUGENE, Mayor of North Tonawanda, N. Y., recently made a trip south and spent a few days in Washington, D. C.

ELY, FRED, Mayor of Mauston, Wis., for two terms and former Postmaster of the city, died recently, aged 40 years.

HARDING, J. H., Fire Chief of Jackson, O., was killed instantly while answering a fire call, being run over as the truck started from the fire house; he was 46 years old and had been Fire Chief for ten years.

HARVEY, L. B., Mayor of Colville, Wash., recently submitted the following appointments of city officers, which were approved by the Council: City Clerk, A. B. Sansburn; Chief of Police, John S. Wright; Superintendent of Streets, William Murry; Superintendent of Water Works, James M. Williams; City Attorney, L. C. Jesseph; Police Judge, William L. Terry; A. W. Cook was appointed to the place on the Council made vacant by the failure of J. L. Torrey, who was elected, to qualify.

HEYLMAN, W. A., Estreada, Ore., has been elected Mayor of the city to succeed Dr. W. K. Haviland, resigned.

KRUSE, A. H., Captain of Police of Vincennes, Ind., has been elected as Chief of Police by the Board of Metropolitan Police Commissioners, vice Edgar M. Fields, deceased, and Patrolman Harry Adams has been promoted to Captain.

LANTRY, FRANCIS J., Fire Commissioner of New York City, has resigned, following an investigation into the affairs of the Fire Department, as a result of the fire at the Parker Building, where several firemen were killed, and the resignation has been accepted by Mayor McClellan.

MCCULLOUGH, C. S., Mayor of Darlington, S. C., serving his second term, died recently, aged 54 years.

MORROW, CAPT. JAY J., Washington, D. C., who has been Engineer Commissioner for nearly a year, and who was Assistant Engineer Commissioner for more than three years, has been promoted to Major of the Engineering Corps, U. S. A. Commissioner Morrow is a Pennsylvanian, thirty-seven years old; he graduated from the West Point Military Academy in the class of 1891.

SHERIDAN, JAMES, Chief of Police of Newark, O., has resigned; he is well known in police circles, particularly in Ohio.

TAYLOR, EDWARD ROBSON, Mayor of San Francisco, Cal., is to be married shortly to Miss Eunice Jeffers, of San Francisco, who is his junior by many years.

TRADE NOTES

Cast-iron Pipe.—Chicago contracts for 4,800 tons for St. Paul and Minneapolis went to the Dimmick Pipe Company and the United States Cast Iron Pipe and Foundry Company. No other large lettings in sight and demand for small lots moderate. Quotations: Water pipe, 4-inch, \$30; 6 to 12 inch, \$29; 16-inch and up, \$28, with \$1 extra for gas pipe. Birmingham: Practically all local capacity will be put in operation, as it is understood St. Paul and Minneapolis lettings will be furnished from the Southwest. Quotations: Water pipe, 4 to 6 inch, \$28; 8 to 12 inch, \$26; over 12-inch, average, \$25, with \$1 extra for gas pipe. San Francisco: Many small inquiries, but no large order expected. Quotations: Water pipe, 12-inch, \$26.50 to \$27.50; 6-inch, \$28; 4-inch, \$28 to \$29. New York: Conditions much better than two or three weeks ago. Some of the shrewdest buyers are now coming into the market. Quotations: Carload lots of 6-inch, \$25 to \$25.50.

Pig Lead.—Market dull but steady. Quotations: New York, 3.75c. to 3.80c.; St. Louis, 3.65c.

Firm Name Changed.—At a meeting of the stockholders of the Eureka Fire Hose Company, January 20, it was decided to change the name of the company to Eureka Fire Hose Manufacturing Company.

Water Company Consolidation.—The New Haven Water Company has acquired control of the Milford Water Company. The capital stock of the Milford company is \$150,000 and it has now \$100,000 in outstanding bonds. The company was organized in 1892 and in 1898 finished its plant. Its source of supply is Beaver Brook, Milford.

New Lighting Company.—A combination of independent street lighting companies has been formed with Eugene S. Newbold, of Baltimore, Md., at the head. The new company is known as the Consolidated Lighting Company, has an authorized capital of \$600,000. The interests acquired are the American Street Lighting Company, American Mantle Company, American Lighting Company, Limited, Cleveland Vapor Light Company and Cleveland Street Lighting Company. A rate war with the Welsh Bach Company is among the possibilities.

Sewer Pipe Report.—The annual report of the American Sewer Pipe Company gives the assets of the company as \$9,935,012. The sum of \$779,105 was charged off for depreciation. The liabilities are: Stock, \$7,000,000, and bonds outstanding, \$1,431,000. The current liabilities are \$307,601. The surplus, after deducting dividends, bond interest and depreciation, is \$1,106,411.

Motor Railroad Car.—Seventy-five miles of hard running over all kinds of railroads, has showed that the new type of gas-electric car made by the General Electric Company is undoubtedly a success. The test was an official one. One man can operate and control the whole.

Series A. C. Arc Lighting System.—Bulletin 1103 of the Fort Wayne Electric Works, Fort Wayne, Ind., explains the operation of direct current series arc lamps on alternating current circuits of constant potential. The apparatus consists of a constant current regulator, a constant potential transformer, a high tension switchboard, constant current A. C. arc lamps and Horn type lightning arrester.

PATENT CLAIMS

876,945. **Arc Lamp.**—George W. Cravens, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Serial No. 224,650.

In an arc lamp, a pair of electrodes inclined to the horizontal, means for producing an arc between the ends of said electrodes, means for moving the electrodes horizontally to compensate for the material consumed by the arc, a magnet for deflecting the arc between said electrodes, and means for moving the magnet vertically to compensate for the change in position of the arc as the electrodes are consumed.

877,003. **Safety Valve for Gas Conduits.**—William Schulze, Detmold, Germany. Serial No. 396,272.

In a safety valve for gas conduits, the combination with a casing of non-magnetic material and provided with conduits for the passage of the gas, of a valve seat arranged between said conduits, a valve of magnetic material fitting on the seat, a diaphragm arranged below the valve seat and being loosely in contact with the stem of the valve, a magnet arranged above the valve, a diaphragm in the upper part of the casing, a pin contacting with the diaphragm and extending above the casing and a spring being in contact with a rigid part of the casing and the underside of the upper diaphragm.

877,255. **Extensible Water Tower or Standpipe.**—Charles B. Tarbell, Tombstone, Ariz. Serial No. 328,084.

In an extensible water tower or standpipe, the combination with a series of telescopic sections adapted to be projected by the pressure of the water admitted thereto, of a cam plate, and means for adjusting said cam plate in the path of projection of all or a portion of said sections.

877,963. **Valve, Gate and Operating Means Therefor.**—Adolph Suck, Boston, Mass. Serial No. 321,090.

In a hopper gate, a chamber formed in said gate and comprising two parallel shafts each carrying a pair of disks mounted axially thereon, webs extending from disk to disk between each pair of disks, said web forming the floor and ends of the chamber, and means whereby said shafts are rotatable in opposite directions, as described.

878,256. **Centrifugal Pump.**—William H. Thorne, Mount Airy, Pa., assignor to William Sellers & Co., Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Serial No. 389,769.

In a centrifugal pump of the character described, the combination, with the disk and its driving shaft, of a movable stop in the water chamber of the pump on the inlet side of the disk and in line with the axis of the disk, and means to adjust the position of said stop.

INCORPORATIONS

Aguilar Light and Power Company.—Aguilar, Col.; capital, \$25,000. Incorporators: E. G. Hawkins, Fred Bartlett and others.

Atlantic Construction Company.—Portland, Me.; to carry on a general construction business; capital, \$1,500,000. Incorporators: President, James E. Manter, of Portland; Treasurer, Clarence E. Eaton, of Portland, and others.

Billings Light, Power and Water Company.—Billings, Mont.; capital, \$135,000. Incorporators: S. F. Bronson, J. B. Berghaus and others.

Walston H. Brown Construction Company.—Portland, Me.; general contractors; capital, \$1,500,000. President, J. E. Manter; Treasurer, C. E. Eaton; Clerk, M. W. Baldwin, all of Portland.

Cement Interlocking Steel Company.—Jersey City, N. J.; patents relative to cement and steel construction, brick, stone, building materials, etc.; capital, \$125,000. Incorporators: Willard C. Fisk, Clinton E. Fisk, John Warren, as above.

Clayton Gas Fumigating Company.—New York, N. Y.; to manufacture apparatus and materials for fumigation and disinfection, and for extinguishing fires; capital, \$200,000. Incorporators: William J. Donaldson, 1 Wall street; William Victor Goldberg, Joseph J. Schmidt, Jacob I. Weinstein, S. Simon, 20 Broad street, New York.

Central Light, Heat and Power Company.—Pittsburg, Pa.; to supply electricity in the Third Ward. Incorporators: F. H. Steele, T. J. Crumb and H. Tucker, all of Pittsburg.

Citizens' Water and Light Company.—Portland, Me.; capital, \$230,000; proportion to be represented in Indiana, \$230,000; to operate water works and electric light plant at Shelbyville. Owners: C. E. McGaughlin, H. L. Cram and A. F. Pine, all of Portland.

Compania Empresada Aguas de Calientes.—Aguascalientes, Mexico; to construct a system of water works; capital, \$300,000. Incorporators: Ramon G. Gutierrez and others.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
New York	Brooklyn	February 13, 11 A.M.	Furnishing 8,500 cu. yds. sand, 600,000 lbs. paving pitch, 1,200 cu. yds. paving gravel, 7,500 bbls. Portland cement, 60,000 sq. ft. bluestone flag, 2,500 cu. yds. sand, etc.	Bird S. Coler, Boro. Pres.
Missouri	Kansas City	February 13, 11 A.M.	Asphalt paving portions 12 streets art. stone walks, 23 streets.	E. A. Harper, City Engineer.
New York	North Olean	Feb'y 13, 7:30 P.M.	Paving Union St., inc. 16,000 sq. yds. brick on concrete, with excavation, curbing street inlets, etc.	Knight & Hopkins, Rome, Engrs.
Ohio	Columbus	February 14, noon	Brick or asphalt paving, etc., 7 streets; macadam, Deshler Ave.	E. W. Hirsch, Sec'y Bd. Pub. Serv.
Minnesota	Minneapolis	February 14...	Portland cement for paving, curb and gutter for 1908.	Andrew Rinker, City Engineer.
New York	Buffalo	February 14...	Paving, re-paving, macadam, Kenmore, Villa Aves., Scott St.	F. G. Ward, Com'r Pub. Wks.
Michigan	Muskegon	February 15, 10 A.M.	Furnishing crushed limestone or fieldstone f. o. b.	County Road Commissioners.
New York	Madison Bar'ks.	February 15, 2 P.M.	Constructing 6,000 ft. concrete sidewalks.	R. W. Drury, Con. Q. M. U. S. Army.
California	Santa Monica	February 15...	Asphaltum, 2,000 sq. yds. on concrete, inc. curb, etc. \$6,000.	Thomas H. James, City Engineer.
Alabama	Birmingham	February 15...	Furnishing 10-ton steam road roller.	Jno. T. Reed, Pres. Co. Bd. Revenue.
Indiana	Hammond	February 15...	Furnishing road material during 1908.	F. R. Schaaf, Township Trustee.
Ohio	Youngstown	February 17, noon	Grading and paving various streets; also furn. 50 tons asphalt.	W. H. McMillin, Clk., Bd. Pub. Serv.
New York	New York	February 17, 2 P.M.	Furnishing and delivering 1,200 cu. yds. washed gravel, 6,000 cu. yds. sand, 60,000 gals. No. 6 paving cement.	J. F. Ahearn, Pres. Boro. Man.
Indiana	Mt. Vernon	February 17, 2 P.M.	Constructing 5 gravel roads, over 11 miles long.	Paul Maier, Co. Auditor.
Georgia	Atlanta	February 17, 3 P.M.	Furnishing and laying brick, tile and sheet cement sidewalks, setting granite and concrete curb, etc., in 1908.	R. M. Clayton, City Engineer.
Kansas	Emporia	February 17...	Grading, curbing and paving portion of Neosho St.	G. O. Mathewson, City Clerk.
Alabama	Montgomery	February 17...	Grading and graveling 16½ miles. Flowers and Old Pike roads.	J. T. Bullen, County Engineer.
Ohio	Youngstown	February 17...	Crooseted wood-block floor and steel joists, Lat. Falls br.	W. B. Jones, County Auditor.
Colorado	Denver	February 17...	Furn. mat. and paving with 6-in. sandstone blocks on concrete and 2-in. sand cushion, Wazee St., cost, \$7,320; Blake St., \$59,653.	J. B. Hunter, City Engineer.
South Carolina	Charleston	February 17...	Laying concrete sidewalks and setting flags during 1908.	J. H. Dingle, City Engineer.
Ohio	Norwalk	February 17...	Woodlawn Ave., paving walk, etc.	John Laytin, City Engineer.
Illinois	Mt. Vernon	February 18, 7:30 P.M.	Construct'g 1,167 sq. yds. brick paving; foundat'n already laid	W. B. Williams, Mayor.
Illinois	Paris	February 18, 7:30 P.M.	Paving three streets with brick on concrete.	W. T. Blackburn, City Engineer.
Ontario	Hamilton	February 18...	Supplying Portland cement, paving brick, gravel, etc., during '08	S. H. Kent, City Clerk.
New York	Brooklyn	February 19, 11 A.M.	Furnishing and delivering 30,000 paving brick, 19,000 paving block, broken trap rock and trap rock screenings.	Bird S. Coler, Boro. Pres.
Washington	Aberdeen	February 19, 5 P.M...	Dyking 5,100 cu. yds.; filling, 1,458,200 cu. yds. in certain streets and alleys; separate bids.	H. W. Troutman, City Eng'r.
Ohio	Reading	February 19...	Macadam, concrete curb and gutter, grading, etc., Jeff. Ave.	Jos. R. Vedder, Village Clerk.
Florida	Fort Barrancas	February 20, noon...	Improving roadway to Barrancas Nat'l Cemetery.	Col. J. W. Pope, U. S. A., Atlanta, Ga.
Ohio	Cambridge	February 20, noon...	Grading, paving, etc., 3 sts.; 4,976 cu. yds. exc.; 13,245 sq. yds. brick paving; 1,232 lin. ft. curb; 670 ft., 12-15-in. pipe sewer.	A. J. Hall, Pres. Bd. Pub. Serv.
Pennsylvania	Freeport	February 20, 7:30 P.M.	Paving, etc., 2 streets, inc. 600 cu. yds. exc.; 7,500 cu. yds. fill; 4,000 lin. ft. curb; 900 ft., 15-in. sewer, etc.; also furn. mat'l's.	G. B. Findley, Boro. Engineer.
Ohio	Cincinnati	February 21...	Improving Hamilton pike in Springfield township.	Fred. Drehs, Clk. Co. Com'rs.
Utah	Salt Lake City	February 21...	Improving First South St.	F. J. Leonard, Chm. Bd. Pub. Wks.
Indiana	Terre Haute	February 22, 11 A.M.	Constructing 2 miles 4½ ft. gravel road, Henry Creek twp.	Nathan G. Wallace, Co. Auditor.
Minnesota	Winona	February 24...	Paving 12 blocks, Main and Center Sts., with brick.	P. Jasmer, City Recorder.
South Dakota	Fort Meade	March 2, 10 A.M.	Bldg. roads, sidewalks, gutters and drains.	Capt. L. C. Scherer, Q. M.
Delaware	Fort Dupont	March 2, 11 A.M...	Bldg. macadam roads, granolithic sidewalks, concrete curb and gutter and wooden bridge.	Capt. J. L. Knowlton, Q. M., U. S. A.
Maine	Fort Williams	March 2, 11 A.M...	Grading at Fort Williams.	Capt. F. J. Morrow, U. S. A., Portl'd.
Virginia	Fort Hunt	March 2, 2 P.M...	Macadam roads, brick gutters, concrete abutments, etc.	Quartermaster U. S. A.
Tennessee	Fayetteville	March 2, 7 P.M...	Grading and constructing 4 or 5 miles of sidewalks, asphalt or concrete, not less than 4½ ft. wide; begin May 1.	D. M. Goodner, Mayor.
New York	Fort Terry	March 2, 11:30 P.M...	Bldg. 3,400 lin. ft. macadam; 1,200 lin. ft., dirt roads.	Capt. Wm. E. Horton, Q. M., U. S. A.
Indiana	Monticello	March 3, noon...	Constructing 3,975 ft. stone road in Jackson township.	J. L. Ackerman, Co. Auditor.
New York	Corning	March 5, noon...	Brick paving 16,250 sq. yds.; macadam, 4,250 sq. yds., both jobs with cement curbs and gutters.	J. T. Hall, Clk., Bd. Pub. Works.
New York	Fort Wood	April 1, 11:30 A.M...	Constructing roads and walks at post.	C. C. Burnell, Q. M., U. S. A.
Water Supply				
New Jersey	Newark	February 13, 3:30 P.M.	Furn. coated c. i. pipe and specials: 629 tons 4-8-in.; 327 tons 10-16-in.; 24 tons, 20-24-in.; 75,000 lbs. specials, etc.	M. R. Sherrerd, Ch. Engr. St. & W. Bd.
Wisconsin	Milwaukee	Feby 14, 10:30 A.M.	Furnishing 100 fire hydrants, "Single Valve Mathews" or "Improved Stowell" pattern.	C. J. Poetsch, Chm. Bd. Pub. Wks.
Alabama	Fort Morgan	February 14...	Extension water distribution system at post.	Capt. L. F. Garrard, Q. M., U. S. A.
New Jersey	Asbury Park	February 15, noon...	Furnishing 10 fire hydrants.	John L. Coffin, Supt. Dept. W. & S.
New York	Madison Bar'ks.	February 15, 2 P.M.	Constructing 300,000-gal. steel tank.	R. W. Drury, Con. Q. M., U. S. A.
Iowa	Washington	February 17, 7 P.M.	Constructing deep well, 1,800 to 2,400 ft. deep.	John H. Steck, City Clerk.
Massachusetts	Marion	February 17, 7 P.M...	Furn. and erecting pumping machinery for w. w. system.	Louis E. Hawes, Engineer.
Illinois	Lockport	February 17...	Bldg. 150,000-gal. stand pipe, 150 ft. high, foundations, etc.	Daniel F. Fisher, City Clerk.
Minnesota	Stillwater	February 25...	Water works for new State prison; cost, \$35,000.	State Bd. of Control, St. Paul.
Alabama	Fort Morgan	February 27, 2 P.M...	Furn. and installing two 50-h.p. horizontal tubular boilers, 2 compound duplex pumps, 150 h.p. feed-water heater, and purification system, feed-pump and inspirator.	Capt. L. F. Garrard, Jr., U. S. A.
New York	Brewster	February 28, 8 P.M...	Laying c. i. pipe, etc., building concrete reservoir.	Richard Mitchell, Village Clerk.
Maine	Kittery	February 29, 1 P.M...	Laying 6 miles, 4, 6, 8 and 10-in. water mains.	L. E. Scruton, Civil Engineer.
Pennsylvania	Philadelphia	March 3, noon...	Pumping engines for Roxboro and Belmont stations; cont. 138.	Wm. R. Knight, Act. Dir. Bur. Water.
Texas	Dallas	March 3, 3 P.M...	Furn. 10,000,000-gal. high-service vertical triple expansion condensing crank and fly wheel pump or other engine.	J. B. Winslett, City Secretary.
Indiana	Elkhart	March 11, 10 A.M...	Furn. for 25 yrs. from April 28, 1909, ample supply of water for all domestic and public uses, inc. fire protection.	A. T. Maltby, Chicago, Ill., Cons. Eng.
California	Oakland	March 18, 11 A.M...	Labor and material for constructing salt water pumping plant; specifications, etc., at MUN. JOUR.	Walter B. Fawcett, Sec'y Bd. Pub. W.
Sewerage				
Ohio	Cleveland	February 13, noon...	Bldg. sewers in various streets, avenues, courts and roads.	A. R. Callow, Sec'y Bd. Pub. Serv.
New Jersey	Newark	Feby 13, 3:30 P.M.	Furnishing and laying 40,000 ft., 6-in.; 10,000 ft., 4-in.; vit. salt-glazed sewer pipe; 2,520 specials for 1908.	M. R. Sherrerd, Ch. Eng. St. & W. Bd.
Illinois	Wilmette	February 13, 8 P.M...	Constructing relief sewer; new bids.	C. N. Roberts, Reaper Blk., C. E.
Ohio	Columbus	February 14, noon...	Constructing sewer in alley west of Eldon Ave.	E. W. Hirsch, Sec'y Pub. Serv.
Wisconsin	Madison	February 14...	Laying pine sewers in Milton Park; cost, \$3,000.	John F. Icke, City Engineer.
Minnesota	St. Paul	February 14...	Following material for bldg. sewers in 1908: vit. clay pipe, special castings, sewer brick, natural and Portland cement.	Andrew Rinker, City Engineer.
Ontario	Hamilton	February 14...	Supplying sewer pipe, sewer brick, etc., required during 1908.	S. H. Kent, City Clerk.
Ohio	Youngstown	February 17, noon...	Bldg. sewer in Shehy St., bet. Truesdale Ave., Jackson St.	W. H. McMillin, Clk., Bd. Pub. Serv.
Georgia	Atlanta	February 17, 3 P.M...	Furnishing vit. pipe, cement for sewer work, manhole and catch basin covers, and bldg. sewers during 1908.	R. M. Clayton, City Engineer.

Sewerage—Continued.

Kansas	Emporia	February 17	Bldg. extension to storm water sewer in Neosho St.	G. O. Mathewson, City Clerk.
Ohio	Norwalk	February 17	Chatham and St. Mary Sts., sewer improvements.	T. P. Kellogg, Clk. Bd. Pub. Serv.
Wisconsin	N. Milwaukee	February 17	Sewage pump and six filter beds.	W. G. Kirchoffer, Madison, C. E.
South Carolina	Charleston	February 17	Furn. iron castings, brick, Portland and Rosendale cement and lumber; furn. and laying 8 to 24-in. terra cotta pipe, etc.	Board of Public Works.
Nebraska	N. Platte	February 18, 5 P.M.	Labor and materials: 4,840 ft., 10-in. pipe; 112 x 10-in. Y's; five 5-ft., concrete manholes; 1 concrete flush tank; trench, 5-1/2 feet.	Hershey S. Welch, City Eng.
New York	Auburn	February 18	Bldg. sewer in Elm St., bet. Capital and Franklin Sts.	W. Thomas Wooley, City Eng'r.
Ohio	Hamilton	February 18	Constructing Crawford run sewer and ditch, 3 Sections: 1st, from river, 994 ft. to Peck Ave., cost \$10,802.70; 2d, to where closed sewer begins, 3,600 ft., cost \$10,207.40; 3d, closed sewer, 2,700 ft. long, cost \$50,708.10.	
Maryland	Baltimore	February 19, 11 A.M.	Bldg. West Low Level Interceptor, Sec. No. 3: 1,876 ft. 66-in. sewer; 1,355 ft. 60-in., 80 ft. 30-in., 2 bell mouths.	County Commissioners
New York	Brooklyn	February 19, 11 A.M.	Furn. and delivering 2,000 in. ft. 6-12-in. vit. sewer pipe.	Peter Leary, Jr., Chm. Sewer Com.
Ohio	Eaton	February 19, noon	Constructing sewers and a disposal plant, inc. 109,500 ft. 6-24-in. sewer pipe; 8,830 ft., 27-42-in. brick or concrete sewer, manholes, etc., 4-24-ft. deep.	Bird S. Coler, Boro. Pres.
Dist. of Columbia	Takoma Park	February 24	Constructing sewer system on Armory hosp. reserv., inc. sewage tank, pump pit, pumps and motor.	A. L. Reid, City Engineer
Ohio	Mingo Junction	March 1	Bldg. Concrete or brick sewers, to cost \$25,000.	Capt. H. L. Pettus, Q. M., U. S. A.
Mississippi	Charleston	March 3, 10 A.M.	Constructing main ditch, 4 x 20 ft., 4 miles long.	S. E. Floyd, Wintersville, C. E.
Wisconsin	Lake Mills	March 3	Constructing sanitary sewers in certain streets.	E. Bacon, Sec'y, Co. Drain Com'rs.
New York	Auburn	March 17, 8 P.M.	Bldg. sewers and disposal plant; 4 wards, \$100,000, inc. 14,700 ft. 8 in., 11,300 ft. 10 in.; 6,000 ft., 20 in.; 3,600 ft., 15 in.; 300 ft. 18 in.; 1,250 ft. 20 in.; 16,000 cu. yds. exc., 5 to 18 ft. deep; 17,000 ft., 5-in. vit. tile; also 20,000 ft., 4 in.; 6,000 ft., 6 in.; 7,000 ft., 8 in.; 2,000 ft., 10 in.; 200 ft., 12 in., of seconds; 84 manholes, 9 ft. deep; 12 flush tanks; 12 lamp holes; also reinforced concrete septic tanks and contact beds and auto-closing appliances.	W. G. Kirchoffer, Madison, C. E.
Ohio	Jackson	March 25	Bldg. 1 1/2 miles sanitary sewers; estimated cost, \$15,000.	W. Thomas Wooley, City Engineer.
				J. W. Turner, Village Engineer.

Public Buildings

Michigan	Lansing	February 13	Erecting \$125,000 agricultural building.	A. M. Brown, Sec'y Mich. Ag'l Com.
New York	Buffalo	February 13	Bldg. fire truck house, also shelter house, Wash. market.	F. G. Ward, Com'r Pub. Wks.
West Virginia	Bluefield	February 14, 3 P.M.	Constructing, complete, Federal Building.	James Knox Taylor, Wash., D. C.
North Dakota	La Moure	February 14	Erecting County Court House.	Buechner & Orth, St. Paul, Minn., Architects.
Ohio	Ashtabula	February 14	Erecting 2-story, 4-room addition, Central School.	C. N. Campbell, Clk., Bd. Educ.
Ohio	Columbus	February 14	Bldg. greenhouse in Schiller Park; except excavation, etc.	E. W. Hirsch, Sec'y Bd. Pub. Serv.
Virginia	Toano	February 15, 6 P.M.	Bldg. brick high school on concrete foundation.	R. K. Taylor, Chm. Bldg. Com.
Wisconsin	Edgar	February 15	Erecting one-story brick school.	Ferd. Weber, Dist. Clk., R. F. D., No. 2.
Louisiana	Estherwood	February 15	Constructing brick high school.	R. H. Kocton, Crowley, Arch.
Texas	Dallas	February 15	Bldg. 2-story and basement brick school.	M. L. Waller, Ft. Worth, Arch.
Connecticut	Willimantic	February 15	Model school at normal school; cost, \$50,000.	T. D. Bradstreet, Hartford, St. Con't.
Montana	Missoula	February 15	Erecting library for University of Montana.	A. J. Gibson, Architect.
Kentucky	Owensboro	February 15	Erecting 8 room school, G. T. Horn, Chm. Bd. Educ'n.	R. A. Bradley, Am. Cent. Life bldg. Indianapolis, Ind., Archt.
Minnesota	Mankato	February 15	Erecting \$65,000 normal school.	State Board of Control, St. Paul.
Minnesota	St. Peter	February 15	Erecting \$65,000 tuberculosi hospital.	State Board of Control, St. Paul.
Arkansas	Conway	February 15	Erecting a \$40,000 school buil'ing.	City Clerk.
Michigan	Detroit	February 15	Building brick police station; also plumbing and heating.	Louis Kamper, Fine Arts Bldg., Arch.
Ohio	Cincinnati	February 17, noon	Erecting \$750,000 high school, 272x192 ft., whole or separate; also heating and ventilating system, Westwood School Bldg.	Dr. J. M. Withrow, Bd. Educ.
Utah	Odgen	February 17, 3 P.M.	Constructing addition to Federal Building.	James Knox Taylor, Wash., D. C.
Kansas	Wichita	February 17, 5 P.M.	Proposals and preliminary plans for auditorium and convention hall building, 137 x 150 ft., etc.	R. M. Dorr, City Clerk.
Virginia	Richmond	February 17, 6 P.M.	Bldg. addition to Fairmount School also heating system.	A. F. Hunnt, 1107 E. Main St., Archt.
Texas	Alpine	February 17	Erecting 2-story brick, stone or concrete school.	H. T. Phelps, San Antonio, Archt.
Ohio	Columbus	February 17	Furn. material and install. hot-water system, Blind School.	Stribling & Lum, Archs.
North Dakota	Esmund	February 17	Bldg. 4-room brick on concrete school; also heat, etc.	W. Quennell, Clk., School Dist.
Iowa	Des Moines	February 18, noon	Erecting \$20,000 administration building, State Fair Grounds.	J. C. Simpson, Sec'y St. Bd., Agr.
New Mexico	San Juan	February 18, 2 P.M.	Erecting school bldg. and hospital, San Juan School.	Wm. T. Shelton, Shiprock, Supt.
Ohio	Columbus	February 18, 3 P.M.	Erecting addition, remodeling, etc., Federal Building.	James Knox Taylor, Wash., D. C.
Wisconsin	La Crosse	February 18	Bldg. normal school; cost, \$200,000.	Van Ryn & De Gelleke, Milwaukee.
Connecticut	Meriden	February 18	Constructing State armory; cost, complete, \$90,000.	T. D. Bradstreet, Hartford, St. Con't.
Pennsylvania	Pittsburg	February 19	Preliminary plans, etc., 2 engine houses and hose house; costs, \$25,000; \$30,000, and \$12,500.	Geo. W. Guthrie, Mayor.
Louisiana	New Orleans	February 20, noon	Erecting, etc., 5-story fireproof Delgado Mem. Hospital.	Crosby & Henkel, Morris Bldg., Arch
Dist. of Columbia	Washington	February 20, 2 P.M.	Putting in place, complete, flooring of Tenn. marble or Venetian mosaic, etc., wall bases, ornamental iron work, terra cotta, fire-proofing, etc., National Museum building.	Bernard R. Green, Supt. Constr.
Michigan	Flint	February 20	Erecting City Hall, except lighting, etc., cost, \$65,000 to \$75,000.	Van Leyen & Schilling, Detroit, Archs.
Wisconsin	Green Bay	February 20	Erecting \$45,000 county jail.	Foeller & Schober, Architect.
Arkansas	Pine Bluff	February 21, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Indiana	Sharserville	February 21	Bldg. 2-story and base, brick school, complete; cost, \$30,000.	J. T. Johnson & Co., Architects.
Massachusetts	S. Hadley Falls	February 22	Competitive plans for combination Town Hall and School bldg; also for 4-room school, with assembly hall, etc.	M. J. Judge, Sec'y Sp. Com.
Minnesota	Caledonia	February 22	Erecting a School, District No. 71.	J. G. Alstad Clk., School Board.
Virginia	Fort Myer	February 22, 11 A.M.	Erecting 4 sets officers' quarters, barracks, etc.	Capt. B. B. Hyer, Q. M., U. S. A.
Wisconsin	Madison	February 24, noon	Structural steel work for east wing of new Capitol.	Geo. B. Post & Sons, N.Y., City Arch.
Minnesota	St. Paul	February 24	Bldg. \$30,000 school; remodeling one, \$15,000.	Ino. J. O'Brien, Sec'y Bd. Educ.
Nebraska	Reno	February 24	Erecting south Side fire station.	H. E. Christie, City Clerk.
Wisconsin	Marinette	February 25, 3 P.M.	Constructing U. S. Post Office.	James Knox Taylor, Wash., D. C.
Mississippi	Magnolia	February 25	Erecting a brick school to cost \$25,000.	W. J. Bryan, New Orleans, La., Archs.
Wisconsin	Madison	February 26	Erecting two normal schools; cost, \$180,000 to \$190,000 each.	Van Ryn & De Gelleke, Milwaukee.
Wisconsin	Beloit	February 26	Building a hose station.	J. A. Love, Clk., Fire Board.
Wisconsin	Milwaukee	February 27	Bldg. 3-story normal school, 45 rooms and hall with 900 seats, press brick, stone trimmings, etc., cost, \$220,000 complete.	Van Ryn & De Gelleke, Archs.
Alabama	Tuscaloosa	February 28, 3 P.M.	Constructing, except elevators, Federal Building.	James Knox Taylor, Wash., D. C.
Kansas	Winfield	March 1	Plans for \$80,000 Court House, jail and jailor's residence.	County Board.
Michigan	Saginaw	March 1	Building 4-story, 110 x 180 ft., auditorium; cost, \$100,000.	W. T. Cooper, 308 Hayden St., Arch.
Wisconsin	Madison	March 2, 10 A.M.	Constructing women's building; University of Wisconsin.	M. E. McCaffrey, Act. Sec'y Univ.
Colorado	Colorado Springs	March 2, 3 P.M.	Constructing, complete, Federal Building.	James Knox Taylor, Wash., D. C.
Wisconsin	Edgerton	March 2	Building \$40,000 Mem. high school; 2-story brick.	Leonhouts & Guthrie, Milwaukee, Architects.
Iowa	Waukon	March 2	Ventilating and heating plant in Public School.	E. D. Purdy, Sec'y School Bd.
Ohio	Cincinnati	March 2	Constructing 12-room school, Hopple and Terrace Sts.	Dr. J. M. Withrow, Bd. Educ.
Massachusetts	Fort Andrews	March 3, 10 A.M.	Erecting, complete, additions to brick hospital.	Capt. I. L. Fredenhall, O. M., U. S. A.
Ohio	Akron	March 3, noon	Erecting Portage Path School, plans by Harpster & Bliss.	F. G. Marsh, Pres., Bd. Educ.
Indiana	Connersville	March 3	Making improvements at County Court House.	J. L. Kennedy, Co. Auditor.
Minnesota	Duluth	March 4, 3 P.M.	Constructing, complete, extension to Federal Building.	James Knox Taylor, Wash., D. C.
Minnesota	Red Wing	March 5, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
California	Cahuilla	March 10, 2 P.M.	Constructing school at Cahuilla Indian School.	C. L. Swain, Aquangua, Supt. Ind. Sch.
South Carolina	Greenville	March 10, 3 P.M.	Extending, remodeling, etc., Federal Building.	James Knox Taylor, Wash., D. C.
Iowa	Clinton	March 10	Erecting fire station at No. 4.	William E. Hayes, City Clerk.
New York	Rochester	March 12, 3 P.M.	Constructing, complete, except elevator, exten. to Federal Bldg.	James Knox Taylor, Wash., D. C.
Indiana	Anderson	March 15	Erecting \$125,000 high school, R. P. Daggett & Co., Architects.	J. D. Pearcey, Supt. School Bd.
Iowa	Des Moines	March 15	Erecting new City Hall, to cost about \$250,000.	Proudfoot & Bird, Crocker Bldg., Architects.
Virginia	Richmond	March 23	Erecting combined market and armory building; cost, \$100,000; also designs, drawings, etc.	C. E. Bolling, City Engineer.
Wisconsin	Rhineland	March 23	Bldg. fireproof Co. Court House; cost, \$100,000.	Arthur Taylor, Chm. Bldg. Com.
Pennsylvania	New Castle	May 1	Erecting 3-story brick and stone high school, 200 x 190 ft., estimated cost, \$250,000.	W. G. Echles, Lawrence, Tr. Bldg. Architect.

Bridges

Missouri	St. Charles	February 13	Erecting Cuivre River bridge at Old Monroe: cost, \$8,000.	County Commissioners.
Missouri	Huntsville	February 14	Bldg. sub. and superstructure of low truss bridge, capacity 1,200 lbs. per sq. ft.	N. A. Matlock, Design Eng'r.
Mississippi	Biloxi	February 15, 3 P.M.	Bldg. lagoon bridge, etc., Quar Sta., Ship Island.	James Knox Taylor, Wash., D.C.
Indiana	Borden	February 15	Bldg. iron bridge, piers and abutments over Muddy Fork.	Peter Nachand, Co. Auditor.
Mexico	Monterey	February 15	Bldg. steel superstructure, two 74-ft., 2-in span bridge, etc., row of stores and st. railway, also for propositions with diagrams for bridge, etc.	Alfred Giles, San Antonio, Tex., C. E.
Ohio	Youngstown	February 17, 11 A.M.	Steel joists and creo wood block floor, Lant. Falls br.	Will B. Jones, County Auditor.
Ohio	Newark	February 17, 1:30 P.M.	Bldg. 3 steel bridges, about 80 ft. span.	E. S. Jackson, Asst., Co. Eng'r.
Texas	Rosenberg	February 17, 2 P.M.	Erecting steel highway bridge over Brazos River.	Jno. W. Maxcy, Houston, Cons. Eng.
Washington	Skokanawa	February 17	Bldg. 2 bridges, 32 and 42 ft. long on E. Valley Road.	Board of County Commissioners.
Nebraska	Grand Island	February 18, noon	Bldg. all cement, metal and wooden bridges in 1908.	C. H. Poell, County Clerk.
Ohio	Newark	February 18	Bldg. steel-concrete crossing over canal at S. 3d St.; 182 cu. yds. concrete; 200 cu. yds. fill.; 360 sq. yds. brick, 1,800 sq. ft. artificial stone paving, curbing, etc.; cost, \$3,400.	C. H. Wells, City Engineer.
Iowa	Waterloo	February 19, 7 P.M.	Bldg. eight 76-ft. arches, steel and concrete, with 40-ft. rdway, and two 8-ft. walks, also 60-ft. arch with 36-ft. rdway, two 7-ft. walks; also 2 abutments and 3 piers for steel truss bridge, truss spans to be re-erected; all concrete steel.	C. T. Wilson, City Engineer.
Florida	Fort Barrancas	February 20, noon	Rebuilding bridge over Bayou Grande; also improving road.	Quartermaster, U. S. Army.
Manitoba	Brandon	February 20, noon	Bldg. rein. concrete or steel bridges and approaches.	Harry Brown, City Clerk.
Louisiana	Alexandria	February 24	Steel span bridge, pile trestle approach.	Ira W. Sylvester, Cons. Eng'r.
Ohio	Cleveland	February 26, 11 A.M.	Constructing steel-concrete bridge, Brooklyn township.	A. B. Lea, County Engineer.
Virginia	Lynchburg	February 29	Bldg. concrete viaduct on D St., to cost \$30,000.	H. L. Shaner, City Engineer.
Mississippi	Gulfport	March 2	Bldg. drawbridge over river, near Morris's Ferry.	F. S. Hewes, County Clerk.
Washington	Wenatchee	March 3, 10 A.M.	Bldg. trestle bridge over dry gulch, Co. road No. 175, Sec. 14.	John Godfrey, Clk. Co. Com'rs.
Nebraska	Neligh	March 3, noon	Bldg. all Co. bridges, 20 to 100 ft. long, during 1908.	W. H. Morgan, County Board.
Minnesota	Fergus Falls	March 6, 8 P.M.	Bldg. rein. concrete bridge; also with plans, etc.	C. A. P. Turner, Minnpls., C. E.
Minnesota	Watertown	March 31	Furn. 7,000 ft. white oak bridge plank, 3-in. thick, 16 ft.	J. F. Boylan, Village Recorder.

Lighting and Electricity

Wisconsin	Milwaukee	Feb. 13, 10:30 A.M.	Furn. & erecting on foundations of city, all machinery, etc., for complete gas-producer plant for city; plans, \$25.	Chas. J. Poetsch, City Engineer.
Arkansas	Conway	February 14	Electric wiring, heating, etc., School building.	Chas. L. Thompson, Little Rock, Ark.
Dist. of Col'bria	Washington	February 15, noon	Furn. quantities electric conduit, etc., Senate Office bldg.	Elliott Woods, Supt. Capitol.
Washington	Seattle	February 15	Constructing system of cluster lights, on Third Ave.; cost, estimated at \$51,200.	C. B. Bagley, Sec'y, Bd. Pub. Wks.
Alabama	Montevallo	February 15	Bldg. power house and laundry, installing boiler and machinery for Alabama Girls' Industrial School.	Wm. E. Spink, Birmingham, Arch.
New Jersey	Park Ridge	February 17	Improvements at electric light station, inc. rebuilding dytic well, reinforcing and raising height of dam; bldg. concrete spillway; 30 kw. gasoline driven direct-connected unit, etc.	Geo. T. Hanchett, N. Y. City, C. E.
Dist. of Col'bria	Washington	February 18	Furn. cable railways and duplex cableways, Circ. 414.	Col. H. F. Hodges, Isth. Canal Com'n.
Ohio	Cleveland	February 18	Furnishing 2,000 vapor street lamp burners, 1,300 glass boulevard globes, 100,000 gals. gasoline, engine or auto gas.	W. J. Springborn, Pres. Bd. Pub. Wks.
New York	West Point	February 20, noon	Furn. and installing light fixtures in 5 bldgs.	Quartermaster, Military Academy.
Maryland	Annapolis	February 21, noon	Power house work and materials at Naval Academy.	Ernest Flagg, 35 Wall St., N. Y. City, Architect.
Virginia	Nat'l Sold. Home	February 21	Furn. material and remodeling electric wiring, 2 bldgs.	John T. Hume, Pres. N. H. D. V. S.
Dist. of Col'bria	Washington	Feb. 24, 10:30 A.M.	Furn. electrical material, coaling crane, hoisting chains, track bolts, sheet copper, steel channels, etc.	Col. H. F. Hodges, Isth. Canal Com.
New Jersey	Atlantic City	Feb. 24, 8:30 P.M.	Bldg. electric lighting standards and foundations, inc. 78 corner and 200 intermediate foundations and standards, 7,000 sq. ft. cement paving laid or relaid, etc.	John Donnelly, Chm. Light Com.
Illinois	Chicago	February 24, 3 P.M.	Lamp brackets for Federal Building.	James Knox Taylor, Wash., D.C.
Iowa	Ft. Des Moines	February 24	Electric wiring, fixtures, etc., 4 sets officers' quarters.	Capt. J. J. Boniface, Q. M., U. S. A.
Georgia	Augusta	February 25, 3 P.M.	Furn. electric switchboard, motor, generator sets, motors, air compressor, pneumatic hammer, cranes, etc.	Commanding Officer, Arsenal.
Louisiana	Lecompte	March 1	Constructing electric lighting plant, estimated cost, \$10,000.	W. H. Jones, City Clerk.
Minnesota	Jackson	March 4, 11 A.M.	Installing electric light fixtures, new Court House; cost, \$1,600.	P. D. McKellar, Co. Auditor.
Indiana	Mt. Vernon	April 1	Lighting streets for 10 yrs., from July 1, 1909 with electric lights, plant to consist of 85 2,000 c.p. enclosed arc lamps; 11 yr. franchise for commercial and residence lighting, 900 with contract.	Henry Kling, City Clerk.
Georgia	Lafayette	May 1	Constructing electric lighting plant.	J. A. Clements, City Recorder.

Miscellaneous

New York	Brooklyn	February 13, 11 A.M.	8,520 cu. yds. sands, 600,000 lbs. paving pitch, 1,200 cu. yds. paving gravel; 7,500 bbls. Portland cement; 60,000 sq. ft. blue stone flagging; 2,500 cu. yds. sand.	Bird S. Coler, Boro. Pres.
New York	New York	February 13, 11 A.M.	Unloading and delivering ashes furn. by Dept. St. Cleaning.	Louis F. Haffen, Pres. Boro. Bronx.
Pennsylvania	Pittsburg	February 13, noon	Furn. 275,000 ft. B. M. white oak plank and timber.	F. P. Booth, County Controller.
Wisconsin	Two Rivers	February 14	Building dock on north side of West Twin river.	Wm. Luebke, Chm. Bd. Pub. Wks.
Michigan	Muskegon	February 15, 10 A.M.	Furnishing 4,980 cu. yds. coarse crushed limestone, 2,985 cu. yds. medium 1,975 cu. yds. screenings.	J. B. Barlow, Clk. Co. Rd. Com'rs.
Virginia	Richmond	February 15, noon	Furn. broom for 12 months to St. Cleaning Dept.	Henry J. Cohn, Supt. St. Cleaning.
Mississippi	Biloxi	February 15, 3 P.M.	Bldg. boat-house and ways and lagoon bridge.	Medical Officer, Quar. Station.
Illinois	Rock Island	February 17, 2 P.M.	Bldg. and repairing dams and shore protection, etc.	C. S. Riche, Major Engrs., U. S. A.
Missouri	Jefferson Bar'ks	February 18, 11 A.M.	Bldg. concrete platform at railroad track.	O. W. Bell, Q. M., U. S. A.
Indiana	Fort Wayne	February 18, 8 P.M.	Installing police alarm system.	D. C. McCarthy, Clkd. B. Pub. Safety.
New York	Albany	February 18	Work Contract 17, State Canal, on Mohawk river, left uncompleted by cancellation of contract.	F. C. Stevens, Supt. St. B. P. W.
New York	Brooklyn	February 19, 11 A.M.	Furn. oil sprinkler and parts; 3 tar melting and gravel heating trucks; 3 road machines; 3 extra sets of blades; wheel scraper and 2 drag scrapers; 30,000 paving brick; 10,000 medina sandstone; 5,000 wooden, 2,000 asphalt and 2,000 iron slag paving blocks; 10,700 cu. yds. broken traprock and 5,925 screenings; 200 bbls. Rosendale cement; 2 asphalt steam rollers; 1,000 cu. yds. binder stone; 600,000 cu. yds. paving pitch or cement.	Bird S. Coler, Boro. Pres.
Montana	Butte	February 19	Furnishing third-class steam fire engine.	M. A. Berger, City Clerk.
Arizona	Fort Huachuca	February 20, 11 A.M.	Constructing a swimming pool.	C. A. H. McCauley, Denver, Colo., Ch. Q. M., U. S. A.
Delaware	Wilmington	February 20, 11 A.M.	Bldg. concrete base, tower and walk, Schomer Lodge Light Sta., Pa.	U. S. Light House Engineer.
Washington	Seattle	February 20, noon	Furnishing stone for Grays Harbor, Wash.	Maj. H. M. Chittenden, Engr. Corps.
New York	New York	February 20, 3 P.M.	Metal shelving in various vaults, U. S. Custom House.	Architect, 11 E. 24th St.
Maryland	Fort Howard	Feb'y 21, 1:30 P.M.	Rebuilding government wharf at Fort Armistead.	Quartermaster, U. S. Army.
Dist. of Col'bria	Washington	Feb'y 24, 10:30 A.M.	Furn. garbage cans, iron outdut, wire, etc.	Col. H. F. Hodges, Isth. Canal Com.
Pennsylvania	Pittsburg	February 24, noon	Furn. three 400-gal. road sprinklers, central discharge.	F. P. Booth, County Controller.
Wisconsin	Milwaukee	February 24, 2 P.M.	Bldg. rein. concrete caisson, break-water pile pier, and plank cribs, removing old piers and dredging.	W. V. Judson, Maj. Eng'rs., U. S. A.
Georgia	Atlanta	February 28, 10 A.M.	Furn. and delivering 10,000 bbls. American Portland cement; also ice-making or refrigerating machines complete; and 6,000 ft. 1/2-in. conduits, 325 outlet boxes, covers, nuts, etc.	R. V. LaDow, Supt. Prisons, Dept. Justice, Washington, D. C.
New York	New York	February 29, 11 A.M.	Furn. a. c. electric elevator, 2 machines, 3 belted motors.	Admiral R. C. Hollyday, Wash., D.C.
Rhode Island	Fort Wetherill	March 4	Constructing addition to wharf.	W. C. Metcalf, Newport, Q. M., U. S. A.
Dist. of Col'bria	Washington	March 12, 10:30 A.M.	Furn. Portland cement; 4,500,000 bbls. to be used.	Col. H. F. Hodges, Isth. Canal Com.
Ontario	Peterboro	March 12	Work on Sec. 3, Ontario-Rice Lake Div. Trent Canal.	L. W. Jones, Ottawa, Sec'y, D.R. & C.
New York	Buffalo	March 14	Constructing concrete walls for ship lock.	H. M. Adams, Eng'r Corps., U. S. A.
South America	Buenos Ayres	May 1, 2 P.M.	Bldg. 2 underground electric railways, etc.	Argentine Legation, Wash., D. C..

STREET IMPROVEMENTS

Little Rock, Ark.—Mayor Lenon has signed the ordinance appropriating \$22,000 to the new Improvement District, No. 135, where 40 blocks are to be paved with vitrified brick.

Sacramento, Cal.—Cement curbs and gutters and a macadam roadway were ordered laid by the City Trustees on Thirteenth street, from P to R; same, Thirteenth, R to Y, but road to be rounded up and oiled and not macadamized. A crossing was ordered installed at Sixth and P streets and at Twenty-second and S streets; also a crossing at Seventh and G streets and at Ninth and I streets; cement curbs and gutters at Fifteenth street, from Tenth to W, with macadam roadway. A resolution of intention was declared for a sewer in the alley G and H, Twenty-second and Twenty-third streets. A crossing was ordered installed at Sixth and S streets. Cement curbs and gutters and a macadam roadway were ordered for Fourth street, from R to Y, and the same for Eleventh street, from R to W.

San Jose, Cal.—All bids for resurfacing San Fernando street were rejected by Council.—Charles H. Pieper, City Engineer.

Colorado Springs, Col.—It is the opinion of Mayor Herzer, President C. H. Fertig and other members of the Council that a reinforced concrete viaduct at Huerfand street, to cost \$40,000, would be in the end more economical than a \$17,000 structure proposed by City Engineer R. H. Ashworth, and steps will be taken at once to increase the appropriation.

Montclair, Col.—The Board of Public Works has directed estimates to be prepared for boulevarding certain streets.—D. W. Webb, Clerk of the Board.

Waterbury, Conn.—Bids will be received, February 24, for the purchase of \$150,000 4 1/2 per cent., 30-year street improvement bonds.—Wm. H. Sandland, City Clerk.

Chicago, Ill.—The Board of Local Improvements has passed plans for many streets to be improved in various sections of the city; estimated cost of improvements, \$500,000.—Address Clerk of the Board.

Joliet, Ill.—Ordinances have been adopted for a cement sidewalk on the north side of Ruby street, from Hickory to Broadway, to cost \$419.76, and on both sides of Sherman street, from Second to Fifth avenues, to cost \$2,730.35.

Evansville, Ind.—The Board of Public Works has ordered plans and specifications for the improvement of fourteen streets; bids will be asked as soon as plans are completed.

Jeffersonville, Ind.—Bids will soon be asked by the Commissioners of Clark County for the construction of thirty miles of gravel roads in Charlestown Township.

Lexington, Ky.—Provision is made in the apportionment ordinance for an increase to \$58,000 in the expenditures for street construction and repair, \$14,000 being for repairs, construction of brick and wooden block streets, \$29,600 for macadam streets, and \$3,000 for guttering and crossing.

Louisville, Ky.—The Board of Public Works has under consideration the improvement of several streets.—Address City Engineer Claybrook.

Annapolis, Md.—The Legislature is considering the issue of \$500,000 State bonds for improving the main highways, also bids allowing the County Commissioners to make additional tax levies for road improvements.—Address Senator Blair Lee.

Grand Rapids, Mich.—Council will receive bids, February 17, for purchase of \$153,000 street improvement bonds.—Address City Clerk.

The Board of Public Works has accepted estimates for improving Wealthy avenue by paving with brick; estimated cost, \$52,000.

Menominee, Mich.—The City Engineer has been directed to prepare estimates for paving certain portions of Ludington avenue.—Address City Engineer.

Minneapolis, Minn.—Residents in the Linden Hills District have petitioned Council to bridge the street railway tracks at Upton avenue, south, or to compel the street railway company to do so, as the crossing is declared to be dangerous.

St. Paul, Minn.—The Park Board has directed estimates to be prepared for improving Reserve Boulevard; the boulevard will be three miles in length.—Address City Clerk.

St. Joseph, Mo.—The Board of Public Works has ordered that an ordinance be drawn for the paving of Kemper street with brick, between Cly street and the alley between Mulberry and Faraon streets, a distance of four blocks.

Jefferson Barracks, Mo.—Captain Bell, Quartermaster, has petitioned Congress for an appropriation of \$50,000 to build a highway from the city limits to the National Cemetery.

Buffalo, N. Y.—Council has ordered that

the following streets be repaved: Exchange street, 42 feet wide, with dressed block Medina sandstone on concrete base, from the west curb line of Hamburg street to the Indian Reservation line, except the crossing of Larkin street; estimated cost, \$37,348; Hamburg Turnpike street, 42 feet wide, with dressed block Medina sandstone on concrete base, from the south approach to the bridge over Buffalo River, to the north ramp of proposed viaduct over Buffalo Creek Railroad tracks and ship canal; estimated cost, \$32,014; Louisiana street, 42 feet wide, with dressed block Medina sandstone on concrete base, from the north curb line of Perry street to a point about 42 feet north of Miami street, except the space occupied by the street railroad tracks and the proposed tracks and two feet outside the same, and the crossing of Elk street; estimated cost, \$7,941; Glenwood avenue, 28 feet wide, from the east curb line of Masten street to the west curb line of Purdy street.

Cohoes, N. Y.—City Chamberlain Richard Bolton has postponed until February 15 the sale of the following 4 per cent., semi-annual bonds: \$30,617.98 2 2/3 average street paving and \$18,000 one to ten-year serial Ontario street bridge.

Schenectady, N. Y.—The Public Service Commission, Albany, has approved work in connection with the elimination of twenty or more grade crossings in Schenectady, at a cost of \$1,000,000.

Utica, N. Y.—Petition has been made to the Public Service Commission for permission to build a viaduct over the two Southern Railroads at Pleasant street.

Newbern, N. C.—Bids will be received in the near future for the construction of 12 miles of sidewalk and for paving certain streets, according to plans and specifications; estimated cost, \$100,000.—Address City Clerk.

Alliance, O.—Supt. E. T. Whiter, of the Pennsylvania Railroad Company, has received a letter from City Engineer Gyger urging prompt action toward securing a subway at the Arch avenue crossing, in which the city will co-operate.

Barberton, O.—Council will proceed with the Bolivar road paving.

Berea, O.—The improvement of East Grand street, Badgley road, Seminary street and East Bridge street have all been decided on; bond issues for these improvements have been authorized.—O. R. Stone, Village Clerk.

Dayton, O.—City Engineer Cellarius has submitted an estimate to the Board of Public Service on the cost of repairing the paved streets and alleys which need attention, the total cost being \$33,201.10, the city's share being \$27,751.50 and the railroad companies' share for paving in car tracks \$5,629.60, divided as follows: Asphalt streets, 13,797 square yards; brick, 5,570 square yards; stone, 28 square yards, and for alleys, asphalt 844 and brick 181. The resurfacing of Brown and Washington streets will require 8,264 square yards. Referred to Committee on Streets. Every street in the city was carefully gone over and this estimate is considered very accurate.

Marion, O.—Preliminary legislation to pave Silver street has been introduced; Council anticipates a great deal of street paving the coming season, plans for which will be prepared during the next month.

Port Clinton, O.—The paving of Fourth street, according to the plans of Engineer DeWitt, has been decided on; this will be the largest public improvement in this town since the construction of the water works plant.

Youngstown, O.—Members of Council look with favor on the plan for the abolition of the grade crossing at Spring Common; the crossing, by the Engineer's plan, is to be eliminated by the construction of a bridge from Federal street to the B. & O. overhead bridges in Oak Hill and Mahoning avenues; the total cost of the improvement has been estimated by the Engineer at \$140,000, but this amount the members of Council think small as compared with the great improvement it will make.

Zanesville, O.—The Board of Public Service will advertise for bids for improving Brighton Boulevard by paving on concrete foundations; bids will be asked for on asphalt block and brick paving.—Address City Clerk.

Pittsburg, Pa.—Controller Morrow, who has just assumed office, has recommended the construction of a plant by the city to do its own street improvement work, sewerage extensions and paving; he estimates that this will affect the saving of \$3,000,000 annually.

Sharon, Pa.—On motion of Councilman Budd the Council has advised Engineer Griff Nicholls to go over the streets that Council intends to pave the coming year, locate the points where the gas and water companies have not made the proper connections to the curb and then report to the Solicitor, who will in turn notify the

companies to proceed with the work so as to have same complete by the time the city is ready to commence the work of paving.

Wilkes-Barre, Pa.—Several petitions for paving have been presented and acted on by Council; one provides for grading, paving and curbing sections of Elder, Orchard and Susquehanna streets, partly in brick; also for grading, curbing and brick paving Madison street, from East North street to Hollenback avenue, and Metcalf street, from Hugh to Hickory streets.

Palestine, Tex.—Bids will be received, March 20, for the purchase of \$50,000 4 per cent. paving bonds.—John B. Hearne, Mayor.

Wharton, Tex.—The city streets are to be graded.

Graham, Va.—An election will be held to vote on the question of issuing \$20,000 water and street improvement bonds.—Address City Clerk.

Richmond, Va.—The Legislature is considering the expenditure of \$250,000 per year on the public highways, and for the counties to expend as much more in the work.

Seattle, Wash.—R. H. Thomson, City Engineer, has reported the estimated cost of the following street improvements: North and West Seventh street, et al., grading, \$19,900; Grand Boulevard, grading, etc., \$1,500; Holgate street, grading and filling, \$47,000; Fourth avenue, south, et al., grading, etc., \$68,000, and Fourteenth avenue, et al., grading, etc., \$15,000.

Council has passed ordinance for laying concrete sidewalks in Twenty-fourth avenue, et al., to cost \$10,000.

SEWERAGE

Hope, Ark.—Bonds have been issued for the construction of extensions to the sewer and water systems.

New Britain, Conn.—The Finance Committee proposes to issue \$93,000 school and sewer bonds. It is proposed to offer the bonds for sale in about sixty days.—Address City Clerk.

Blueridge, Ga.—Bids will be received March 2 for the purchase of \$30,000, five per cent., 30 years sewer, light and water bonds.—W. C. Boling, Mayor.

Evansville, Ind.—The Board of Public Works has directed the Engineer to prepare estimates for extending the sewer system on Second avenue.

Cedar Falls, Ia.—\$14,000 will probably be expended in sewer construction.

Coffeyville, Kan.—Citizens of the East Side are petitioning for a sewer; it will be known as Sewer District No. 3.

Lexington, Ky.—A new sewer is to be constructed in the northern end of the city at a cost of \$4,000 as soon as possible after the passage of the ordinance so as to take care of a large number of laterals which have been and are to be built in the northwest section; the new main will parallel the Asylum sewer for some distance and will extend from the creek near the Pepper distillery, to a connection with the sewer to be built in Sixth street; the Woodland avenue sewer is also to be extended at a cost of \$510 and \$3,000 is provided for storm water sewers.

Covington, La.—The city has arranged to establish a sewer system in the business district.—Address Mayor.

Aurora, Minn.—The citizens have voted \$30,000 bonds for the construction of sewers and water works.—Address City Clerk.

Perry, N. Y.—A survey is to be made and plans submitted to the State Department of health for an extension of the village sewer system to the wards bordering on Silver Lake; if approved in time, a proposition will be submitted at the village election in March.

Rochester, N. Y.—The Board of Contract will soon let contract for \$30,000 sewer system in Mt. Hope District.

The improvement ordinances passed by the 1908 Council have had to be reconsidered, as the new charter requires that the City Engineer make an estimate of the cost per front foot of each improvement; they include the Gillette and Bay street sewers, grading and walks and a large number of street sprinkling and sewer cleaning ordinances.

New Bern, N. C.—Colvin & Henry, Civil Engineers, are preparing plans for \$50,000 sewer system.

Ashtabula, O.—The State Board of Health has approved of plans for sewer system for the West End District.—A. J. Richardson, City Clerk.

Dayton, O.—As one of the results of the visit to the meeting of the Boards of Health of Ohio, Health Officer Goodhue and President J. Morton Howell, of the local Board, building by Dayton of a sewage plant may be taken up.

East Liverpool, O.—City Engineer Kelly is preparing the plans and specifications for sewers in District No. 2; also for a sanitary sewer in Hazel street.

Springfield, O.—Council has passed an ordinance providing for the construction of the Indian Run sewer.—W. H. Sieverling, City Engineer.

Gould and Wright, of Toledo, have accepted the contract for the new high level intersecting sewer at \$77,000; Engineer Sleeverling has recommended the use of 24-inch vitrified pipe and 30 and 33-inch reinforced concrete pipe.

Hugo, Okla.—The citizens have voted \$150,000 bonds for water and sewer purposes.

Okmulgee, Okla.—Bids will be received February 17 for the purchase of \$67,000 5 per cent., 20 years water and sewer bonds.—Geo. E. Strayer, Recorder.

Beaver, Pa.—The permit for a complete sewer system to cost \$50,000 in the borough of Monaca has been received by James P. Leaf, Borough Engineer, from Samuel G. Dixon, State Commissioner of Health, at Harrisburg; the permit grants the borough the privilege of extending the present sewer over the entire town, and to discharge the sewage into the Ohio river, untreated until 1911; this permit may also be extended by the Commissioner of Health if the public health demands it; the sewerage is required to be a separate system, and no storm waters can be permitted to enter the sewers; arrangements must be made to carry the eastern section discharge below the pumping station, or borough water works, before April 1, 1909.—J. H. Boyds, Secretary of Council.

Derby, Pa.—Council has directed plans to be prepared for a sewer system, estimated to cost \$30,000.—Address City Engineer.

Ellwood City, Pa.—Council is considering plans for sewer system, estimated to cost \$30,000.—Address City Engineer.

Greenville, Pa.—As the result of a visit of members of the State Health Department, it is probable that Greenville will be compelled to build a \$40,000 sewage disposal plant; the sewers of the town empty into the Shenango river, which supplies Sharon, New Castle, and other towns with water.

New Castle, Pa.—The State Board of Health will require the construction of a \$40,000 sewage disposal plant; the water which is used by the cities of Sharon and New Castle has become polluted.

Avon, S. D.—Bids will be received February 26 for the purchase of \$8,000, 5 per cent., 10 to 20 year sewer bonds.—Owen Harty, City Auditor.

Seattle, Wash.—The following ordinances have been passed, ordering construction of sewer in Atlantic street, et al., at an estimated cost of \$69,000, and in Thorndyke avenue, et al., to cost \$154,000.—R. H. Thomson, City Engineer.

Marinette, Wis.—L. B. Hillis, City Engineer, is preparing plans for the construction of a sewer on Sherman avenue from Minneapolis to Schields streets, and on Josephine street, from Lewis street to Sherman avenue.

Menominee Falls, Wis.—W. G. Kirchoffer of Madison, has prepared plans for sewerage system.—Address City Clerk.

WATER SUPPLY

Lanett, Ala.—Council has appointed a committee to ascertain the cost of installing a water system.

Castledale, Col.—H. T. Haines is at the head of a project to build large reservoir on Cottonwood Creek.

Rome, Ga.—The city has decided to expand \$33,000 for the extension of water mains.

Lewiston, Ida.—Bids will be received March 16 for the purchase of \$57,300, 10-20 years 5 per cent. water bonds.—Jno. E. Nickerson, City Comptroller.

Post Falls, Ida.—Council has not been able to sell \$22,500 bonds for purchasing water plant.—Address City Clerk.

Carlyle, Ill.—Council is preparing to extend water mains.—Address City Clerk.

Quincy, Ill.—The directors of the Citizens' Water Works Company are preparing to expand \$7,000 in extending water mains.—T. B. Pape, Director.

Fort Dodge, Ia.—Plans have been prepared for a pumping station for the city water works, estimated to cost \$4,000.

Baltimore, Md.—The City and County Commissioners propose to build a large reservoir; \$500,000 bonds will be issued for the purpose; they also have under consideration an ordinance authorizing an issue of \$5,000,000 water loan bonds.—Address City Solicitor Bruce.

Detroit, Mich.—The Water Board has adopted plans for the extension of the 42-inch water main on Jefferson avenue west from Artillery avenue to Solvay avenue; a distance of 3,780 feet; estimated cost of construction is \$82,000.

A locomotive crane was purchased from Browning & Co. of Cleveland, at a cost of \$4,600.

The villages of Ecce and River Rouge have been informed of the bad condition of the water main crossing the River Rouge, due to electrolysis.

Appropriations have been made for the purchase of 15 more drinking fountains similar in design to those purchased last summer.

Aurora, Minn.—Bonds, \$20,000, have been voted for the extension of water system.—Address City Clerk.

Minneapolis, Minn.—The Water Works Committee has under consideration plans for installing a filter plant, estimated to cost \$1,000,000.

Columbus, Miss.—Kaller A. Kramer, of Magnolia, has completed plans for water system, estimate of cost, \$50,000.

Malmo, Neb.—The Trustees have directed estimates to be prepared for water system.

Buffalo, N. Y.—Col. F. G. Ward, Commissioner of Public Works, has asked the Aldermen to favor a \$500,000 bond issue so that water main extensions and new mains costing about that sum can be built; these improvements are a part of the general plan for bettering the city's water system of which the new pumping station and inlet are parts.

Cleveland, O.—The Board of Public Service will prepare a report to Council covering the necessity, feasibility and estimated cost of the proposed filtration plant for the West Side; an appropriation ordinance already before Council asks for \$70,000 for the purchase of land as a site for the plant.—W. J. Springborn, President.

Columbus, O.—Council will be asked to appropriate \$75,000 towards the construction of water works extensions and for increasing the fire protection; the construction of a 16-inch main on Fulton avenue has been recommended.

Fire Chief Lauer in a letter to the Board of Public Service asks for an increased water supply in some sections of the city where the Department has recently been hampered in fighting fire by the lack of water; attention is called to the need of an auxiliary system or an increase in the size of the mains in the business section of the city; if an auxiliary system for the business section is provided, the Chief urges that larger mains be laid in the territory from the river to Fifth street, and from Fulton to Spring streets. New and larger fire hydrants, to be located at street corners and not back in alleys, are also requested; larger mains are asked for in Broad, Town, Rich and Main streets, east to Parsons avenue; Jefferson avenue to Curtis, Curtis to St. Clair and High, Swan to Warren, and for West Broad street from Center street to Davis avenue; the Chief also recommends that the care of fire hydrants and valves be placed in charge of the Fire Department. Council will likely be asked by the Board to issue bonds for \$75,000 for a 24-inch water main to connect with the Spring street main at Long and Fourth streets, and to run south to Fulton street and west on Fulton to Park and Front streets; the board is not favorable to an independent system, as advocated by Fire Chief Lauer.

Geneva, O.—Council is contemplating having a new dam constructed; estimated cost, \$10,500.—J. H. Copp, Town Attorney.

Newton Falls, O.—The Village Council has passed a resolution declaring it necessary to issue bonds in the sum of \$20,000 to provide for a water works system and has set February 24 as the date for the electors to vote upon the proposition.

Wauseon, O.—This town is having trouble with the water works plant and it is reported that between \$25,000 and \$50,000 will be expended for a purification plant.

Youngstown, O.—Council will shortly pass a bond ordinance of sufficient amount to take up the property needed as a site for the proposed Berlin reservoir, now held under option by the Chamber of Commerce.

Carmen, Okla.—The matter of establishing a water plant is under consideration.—Address City Clerk.

Hugo, Okla.—The proposition to issue \$150,000 water and sewer bonds was carried at the election held January 28.—Address City Clerk.

Oklahoma City, Okla.—About \$500,000 will be expended in improving water system.—Address Mayor Scales.

Okmulgee, Okla.—The city is arranging to borrow \$67,000 of the school fund from the State to build water works and sewers; the county will probably borrow \$30,000 from the same fund.

Watertown, S. D.—The matter of establishing municipal water works is under consideration.—Address City Clerk.

Newport News, Va.—Council has petitioned the Legislature for authority to issue \$100,000 water supply bonds.—Address City Clerk.

Spokane, Wash.—Council contemplates having a standpipe installed at 29th avenue and Grand street following an application by the Park Commission for additional water supply in Manito Park; estimated cost, between \$8,000 and \$10,000.

Alboma, Wis.—The Municipal Light & Water plant does not give satisfactory service.—Address City Clerk.

Richland Center, Wis.—Council is considering the advisability of drilling a new 12-in. well, 700 ft. deep, at the site of the electric light plant and move the water works to that location.—W. G. Kirchoffer, Madison, Engineer-in-Charge.

Waukesha, Wis.—W. G. Kirchoffer, Consulting Engineer, Madison, has made a report for an additional water supply; he rec-

ommends the drilling of a number of shallow wells and the installation of a high-lift motor-driven turbine pump.

Montreal, Can.—Plans are being considered by the Water Department for the enlargement of the aqueduct for a greater water supply, which will call for the expenditure of almost \$2,000,000.

Palmerston, Ont., Can.—The Town Council contemplates expending \$35,000 for water works extension during 1908.—Galt & Smith, Engineers-in-Charge.

LIGHTING AND ELECTRICITY

Calera, Ala.—P. J. Jemines has sold the Calera electric plant to F. Stein, who will improve the service.

Quincy, Cal.—The Quincy Electric Light Company is preparing to install a plant in the spring; the new plant will have a capacity of 2,500 lights of 16 c.p.—G. F. Gansner, Manager.

New Britain, Conn.—The stockholders of the Stanley Works Company, Myrtle street, have voted to adopt the amendment to its charter granted by the last Legislature, which gives the company authority to transmit electricity from Kent to operate and light its plant in New Britain; the amendment also authorizes the company to increase its capital stock from \$1,500,000 to \$3,000,000; the company is planning to erect a hydro-electric plant on the Housatonic River at Kent.—W. H. Hart, President.

Washington, D. C.—Lieut. Poole, of the Engineer Corps, Superintendent of the State, War and Navy building, has asked Congress, through the Secretary of the Treasury, to appropriate \$15,000 for repairs to the heating apparatus in the State, War and Navy building; Lieut. Poole says that some of the apparatus has been in service over thirty years, and all of it over twenty.

Macon, Ga.—The Citizens' Electric Company has petitioned Council for franchise to furnish electrical energy.

Carlyle, Ill.—An election will be held, February 26, to vote on the question of issuing \$20,000 bonds for enlarging the electric light plant and extending the water mains.

Joliet, Ill.—Council is preparing to let new gas franchise.

El Dorado, Ind.—The electric light plant and machine shop owned by Wm. Smeizer burned; loss \$15,000; it will probably be rebuilt.

Pyrmont, Ind.—The Frankfort, Delphi & Northern Railway Company proposes to build power house at the plant.

Indianapolis, Ind.—The proposition of constructing an independent electric lighting plant at the State Fair Ground is being considered by the State Board of Agriculture.—Charles Downing, Secretary of the Board.

Noblesville, Ind.—The water power plant which was partially built near this point in 1904 is to be completed this year in accordance with revised plans now being prepared by H. von Schon, Consulting Engineer of Detroit, Mich.; Noblesville, which is three miles from the development, will take all the current.

Paoli, Ind.—Bids will be received February 13 for the purchase of \$8,000, 4½ per cent., electric light bonds, payable in the years 1909 to 1918 inclusive.—Oscar Batts, Town Clerk.

Haven, Kan.—Arrangements are being made to light the streets by electricity; plant will soon be established for that purpose.

Louisville, Ky.—The Board of Public Works is considering means to serve better lighting for business district; the Board has already been communicated with by a special committee from the Commercial Club relative to making uniform the electric light standard, and plans for artistic wrought iron standards with metallic street name plates attached have been submitted to them by this committee; the committee is headed by Capt. Brinton B. Davis.

Athens, La.—A. E. Watson is interested in a proposition to establish an electric light system.

Haverhill, Mass.—The Haverhill Electric Co. has decided to commence the work of placing its wires underground as soon as the weather will permit; the cost of the entire work is estimated at \$200,000.—A. B. Tenney, 84 State street, Boston, Mass., General Manager.

Niles, Mich.—Council has granted to the Indiana & Michigan Electric Co. a franchise for the transmission and distribution of electric energy for power for manufacturing.

Port Huron, Mich.—Council offers for sale franchise for establishing a gas plant.

Hinckley, Minn.—R. P. Runkle and J. J. Colburn, of Cloquet, Minn., seek a franchise here for an electric light plant in connection with a proposed flour mill.

Ferguson, Mo.—Council has under consideration the establishing of a municipal light plant.

St. Louis, Mo.—The Herald Electric Company of St. Louis has been incorporated with a capital of \$20,000 by A. L. Jabson, R. S. McCulley, and a number of others.

Bath, N. Y.—The Bath Citizens' Electric Service Company has been granted a franchise by the neighboring villages of Avoca and Sayona to supply the street lights for those places; the company is preparing to install its plant for lighting the streets of Bath, and is expected to be ready to begin operations by May 1. Address Secretary.

Columbus, O.—David L. Parsons, 1526 Third avenue, is making estimates and preparing plans for electric light plant to be equipped with engines, boilers, pumps, heaters, dynamos (100 to 300-K.W., 3-phase machines, or 100 to 150-K.W., direct connected D.C. 500-volt machines), transformers, switchboards, and appurtenances, apparatus for general machine and repair shop, etc.

Warren, O.—Council has decided to secure estimates for the construction of a municipal electric lighting plant, and in case this can be built and operated at a lower rate per lamp than the city is paying at the present time, it will be built this summer. No engineer has been retained.

The Peerless Manufacturing Company has acquired the rights to the use of two dams at Newton Falls, one at Leavittsburg and one at Parkman; the first three of these are on the Mahoning river and the one at Parkman is on the Grand river. The power acquired, which will amount to several thousand horse power, will be used in producing electricity for the use of the Peerless plant, and some of the power will also be utilized in other works throughout the city.

Youngstown, O.—The special committee which has been considering plans for municipal lighting with City Engineer Lille has made a report to Council; it is understood the Consolidated Gas & Electric Company will make an effort to hold the lighting contract by offering better terms in regard to rates and hours of service.

Meadville, Pa.—The city contemplates the building of a new municipal electric light plant, at a cost of \$25,000, under direction of Harry Ellsworth, Superintendent of the Water and Light Department.—B. F. Miller, Jr., City Engineer.

Pittsburg, Pa.—Additions and improvements are contemplated by the New South Pittsburg Light & Power Company, it is stated, including the installation of a 3-phase, 60-cycle, 2300-volt system and extending its transmission lines to Dededoff, Copenhagen and Bridgeport.—C. A. Sutliff, Manager.

Rapid City, S. D.—Rapid Creek, the largest stream in the Black Hills, will soon be harnessed so as to furnish electric power to Rapid City and the mining camps of the hills; a local organization, the Dakota Power Company, has been organized and is now at work constructing a flume and ditches and soon as spring comes up will begin the erection of a large power house about 12 miles west of this city; the city has granted the company franchise to locate and operate in the city, light, power and heat works and appliances.

Dallas, Tex.—Commissioner Davidson proposed that the city erect its own plant at a cost of \$300,000 and supply gas at \$1 or less per 1,000 feet; Mayor Harris approves the proposition and City Attorney Samuels asserts that there will be no legal obstacles encountered.

Fort Worth, Tex.—A private company has petitioned for franchise to establish a gas plant at Rosen Heights.

Odessa, Tex.—An electric power house and ice plant will be established within the next two months, citizens having subscribed ample funds for the two projects; F. Stephens of Midland and D. F. Shaddox of this city will install the two plants.

San Antonio, Tex.—The American Signal Light and Appliance Company has been incorporated with \$25,000 capital by F. Wessel, D. F. Youngblood and others.

Norfolk, Va.—Judge Waddell, of the United States Court, has entered an order directing the issuance of receivership certificates for \$30,000 for the completion of the plant of the Suffolk Gas Company, recently put into hands of receivers.

Osceola, Wis.—C. G. Ladd has a franchise for an electric light plant.

Wheeling, W. Va.—The Mozart Improvement Company has been incorporated with a capital stock of \$100,000, to build and operate electric power plants at Mozart Terrace to be operated by gas engine; it is to be used for power and light purposes.—H. L. Hesse, Secretary-treasurer.

FIRE EQUIPMENT

Glendale, Cal.—The Village Trustees propose to establish a fire department.—Address City Clerk.

Middletown, Conn.—A veto of former Mayor Fisher on the purchase of a fire truck for the reason that no appropriation was made was read in Council and the matter was referred to the Fire Committee to report; the new Council may pass the measure again for Mayor Russell's consideration.

Evansville, Ind.—The Board of Public Works have decided to build two additional hose houses.—Address Fire Chief Bunley.

Des Moines, Ia.—The Fire Department Committee of Council has recommended an issue of \$100,000 bonds for erecting two fire stations and providing additional equipment as recommended by the National Board of Fire Underwriters.

Portland, Me.—Fire Chief Eldridge recommends the purchase of two additional fire engines.

Port Huron, Mich.—Council has been petitioned by the south park residents for improved fire protection.

Albert Lea, Minn.—Council proposes to purchase 500 feet of fire hose.—Address City Clerk.

Minneapolis, Minn.—The National Board of Fire Underwriters recommends the erection of additional fire engine house at a cost of \$100,000.—Address City Comptroller.

Butte, Mont.—John T. Murphy, Fire Chief, recommends the organizing of an additional fire company for the Centerville district.

Kensington, N. Y.—The Business Men's Association recommends the construction of a water tower for fire protection.—Address James Joergensen.

Fessenden, N. D.—A fire company has been organized.—Address B. F. Whipple.

Belhaven, N. C.—An appropriation has been made to purchase fire apparatus.—G. L. Swindell, Town Clerk.

Toledo, O.—The Fire Board recommends the establishment of a fire station in the Western portion of the city.—Address City Clerk.

Connellsville, Pa.—Council has decided to improve the fire protection.—Address J. B. Millard.

Scranton, Pa.—Director of Public Safety Wormser recommends the erection of two engine houses on the West Side.—Address Clerk of the Board.

Wyoming, Pa.—The Borough Council proposes to build \$15,000 town hall and engine house.—Address Clerk of the Board.

Columbus, S. C.—The Fire Board has petitioned for additional engine house.—T. H. Gibbs, Mayor.

Corona, S. D.—Council proposes to improve the fire protection of the village.—Address Recorder.

Kimball, W. Va.—A disastrous fire occurred in this place; the town is without fire protection.

PUBLIC BUILDINGS

Girard, Ala.—Council has authorized an issue of \$10,000 school building bonds.—Address Clerk of the Board.

Paragould, Ark.—A \$25,000 high school was authorized by the last Legislature, plans for which have been drawn, but some legal obstacles have arisen which have delayed matters.

Berkeley, Cal.—The Trustees of Berkeley contemplate erecting a new Town Hall, to cost \$130,000.

Colusa, Cal.—The Board of Supervisors has decided to erect a new Hall of Records, to cost in the neighborhood of \$45,000.

Los Angeles, Cal.—Mayor A. C. Harper, in his annual message to Council, recommends erecting a new city jail, a library in Central Park, six new fire houses to be erected in the business district, new City Hall, and high and other schools.

San Jose, Cal.—Robert O. Summers, 18 West First street, San Jose, has secured contract for making repairs to the City Hall, at \$55,000.—William Binder, Auzerais Building, and T. Lenzen, 119 South Second street, Architects.

Santa Monica, Cal.—The school building which is to replace the one recently destroyed by fire will be of brick, will contain ten rooms, and will cost about \$30,000; a new location will be selected somewhere north of Front street and south of Hill street, with more yard room.

San Francisco, Cal.—The Supervisors' Building Committee has recommended the construction of the Golden Gate school, to cost \$81,000.

Bridgeport, Conn.—Jos. W. Northrop, 211 State street, is preparing plans for an addition and alterations to be made to the Bridgeport Hospital at a cost of about \$20,000.

Torrington, Conn.—Plans will be drawn soon for additions to the North School and the Migeon Avenue School.—James Alldis, Chairman of the Committee.

West Stamford, Conn.—Bids will be advertised for soon for the erection of the proposed new school house in West Stamford. Architects, Boring & Tilton, 32 Broadway, New York City.

Washington, D. C.—The following firms have been designated by the International Bureau of American Republics to submit bids for the new building which is about to be constructed for the bureau at the corner of Seventeenth and B streets: George A. Fuller Company, Washington, D. C.; Richardson & Burgess, Washington, D. C.; James L. Parsons, Washington, D. C.; Newman & Smith, Washington, D. C.; the Noel Construction Company, Baltimore, Md.; Wells

Brothers Company, Baltimore, Md.; J. E. and A. L. Pennock, Philadelphia, Pa.; Cramp & Company, Philadelphia, Pa.; Thompson-Stearrett Company, New York City; James Stewart & Company, New York City; J. C. Vreeland Building Company, New York City; Tidewater Building Company, New York City; the Norcross Brothers Company, Worcester, Mass. The architects of the building, Albert Kelsey and Paul P. Crest of Philadelphia, Pa., have nearly completed the plans and specifications, which will be placed in the hands of the contractors. It is expected that bids will be submitted inside of thirty days and that the actual construction will commence in sixty days.

Plans are about completed for two sixteen-room schools and one twelve-room school, which are to be erected at an approximate cost of \$100,000.

Kankakee, Ill.—W. Carbys Zimmerman, State architect, has plans in preparation for a fireproof three-story hospital to be erected for the Illinois Eastern Hospital for the Insane, to cost \$70,000; plans will be completed about the middle of the month.

Reinbeck, Ill.—Architect Harry E. Westcott of Independence, Ia., has prepared plans for a two-story brick high school, to cost about \$25,000.

Indianapolis, Ind.—The erection of a new school building in Cerealinetown was definitely decided on at a recent meeting of the City School Board; the building will be constructed at Twenty-first street and Sugar Grove avenue, at the corner of Germania Park, and will contain probably ten rooms; it will cost approximately \$50,000, and is expected to be ready for occupancy by the beginning of school next fall.—Elaine H. Miller, City Engineer.

Burlington, Ia.—Plans are being prepared for the erection of a city building, to cost \$50,000.

Muscatine, Ia.—H. W. Zeidler, architect, is preparing sketches for a three-story City Hall building, to cost \$60,000.

Columbus, Kan.—The County High School Board is considering the erection of a dormitory at the county high school in Columbus, which will be built at the cost of from \$30,000 to \$40,000.

Concordia, Kan.—A site has been selected for the proposed library building and it is expected to begin construction work in the early spring.—Address the Mayor.

Covington, Ky.—Bids have been submitted for the remodeling of Central Covington town hall into a fire station.

Fall River, Mass.—Bids will be received in about five weeks for constructing a group of five hospital buildings for contagious diseases, for the City of Fall River, to cost about \$150,000.—Louis G. Destremps & Son, Bennett Block, Architects.

Lynn, Mass.—Plans by Wheeler & Bettom, architects, 59 Exchange street, are being considered for remodeling the City Hall, at a cost of about \$50,000; plans provide for new offices, new plumbing, lighting, etc.—Thomas L. Porter, Mayor.

Portland, Me.—The city government plans the erection of a new building, to be devoted entirely to offices of city officials, to replace the City Hall recently burned.

Annapolis, Md.—Senator Moore has introduced a bill to appropriate \$175,000 for the erection of the Maryland Tuberculosis Sanitarium.

Cassville, Mo.—Barry County is to erect a new court house.

St. Louis, Mo.—Park Commissioner Scanlan is preparing an ordinance authorizing the erection of a new bathhouse at Seventh and Soulard streets, the plans having been agreed upon; the house will cost between \$40,000 and \$50,000, and besides modern bathhouse equipment the building will also contain a swimming pool.

St. Louis, Mo.—The Library Board will probably award the contract for the Central Library this spring; the Library Board has \$1,778,000 available for the purpose.

St. Louis, Mo.—Eames & Young, architects, Chestnut and Seventh streets, will soon start plans for a branch library building for the St. Louis Library Board. Cost \$80,000.

Nebraska City, Neb.—The Board of Education inspected plans for the erection of a fine \$60,000 high school building; the board may submit the proposition to the people to vote on at the coming spring election.

Omaha, Neb.—The County Commissioners have under consideration the issue of \$1,000,000 bonds for the erection of Court House. Address Commissioner Bruning.

Nashua, N. H.—A committee headed by Mayor Albert Shedd will procure plans and estimates for the proposed new Shattuck street school.

Belleville, N. J.—The Board of Education will ask the legal voters of the township to appropriate \$46,500; \$5,000 is intended for the purchase of a plot at Hornblower avenue and Rutgers street, and it is proposed to erect a school building thereon at a cost not to exceed \$38,400; the remaining \$3,100 is for the purchase of a plot of land adjoining the

Jerolaman street school; Charles G. Jones, 280 Broadway, Manhattan, has prepared plans.

New Lisbon, N. J.—It is probable that, as a result of a recent inspection, a new hospital building will have to be built and extensive alterations made at the Burlington County Almshouse.

Passaic, N. J.—Preliminary drawings for a high school building to be built by the Board of Education are being made by John F. Kelley and Davis & Davis, architects, 1600 Chestnut street, Philadelphia, Pa.; the building will cost \$190,000 and equipment \$10,000.

Trenton, N. J.—H. A. Hill, 40 East State street, Trenton, is preparing plans for a 2-story school building for the Board of Education. It will be built of brick, stone and steel, with open plumbing, plate glass, tile work, electric fixtures and steam heat and ventilating systems. Cost, \$75,000.

Albany, N. Y.—Architects Palmer and Hornbostel, No. 63 William street, New York City, are preparing plans for a four-story State education building at Albany for the State; estimated cost, \$3,500,000.

Brooklyn, N. Y.—Plans have been approved by the State Prison Commission, Albany, for the new women's prison, to be erected by the city New York in Brooklyn, on the site of the present prison in Raymond street; cost, \$350,000.

Jamaica, N. Y.—Tuthill & Higgins, architects, 359 Fulton street, Jamaica, probably will be selected as architects for the Carnegie library buildings on Clinton avenue.

Newburgh, N. Y.—It is proposed to build an armory here for the Tenth Separate Company. The proposition to build has been passed by the State Armory Board. The plans provide for a modern building with a drill shed, 120 x 180 ft. It is probable that an appropriation of between \$150,000 and \$175,000 will be asked.

Olean, N. Y.—Senator Fancher has introduced a bill in the Legislature appropriating \$65,000 for a new armory for the Forty-third Separate Company at Olean; the new building will be an enlargement of the present building, as under the plans all of the old armory is to be used.

Ossining, N. Y.—The Commission on New Prisons gives notice that the furnishing of designs, plans, specifications and estimates for construction of buildings for a new prison plant to take the place of Sing Sing Prison, is now open to public competition, under rules and regulations adopted by said Commission. The buildings are to be erected upon a site selected by the Commission, on the west bank of the Hudson River near Iona Island. A copy of the rules and regulations may be had upon application to George McLaughlin, of the Commission, Capitol, Albany, N. Y. Architects desiring to enter this competition should signify their intention in writing, addressed to the Secretary, on or before February 15.

Bryson City, N. C.—Plans are being prepared by Associate Architects Frank P. Milburn & Company, Home Life Building, Washington, D. C., for the erection of a Court House in Swain County for the Commissioners of Swain County.

Cleveland, O.—Hubbell & Benes, Citizens' Building, are preparing preliminary plans for an art museum in Wade Park, for the Cleveland Museum of Art. L. E. Holden, Chairman; cost, from \$500,000 to \$1,000,000.

Massillon, O.—Bids have been asked for a proposed hospital.—Charles F. Swinfurth, Architect.

Sulphur, Okla.—An election will be held to vote on the question of issuing \$50,000 bonds for the construction of school house.—Address City Clerk.

Pendleton, Ore.—A City Hall will be erected at a cost of \$40,000.

Abington, Pa.—Architects Heacock & Hanson, 1218 Chestnut street, Philadelphia, have plans for a three-story high school building to cost \$50,000 for the School Board.—J. B. Goenther, Secretary.

Beaver Falls, Pa.—At a special meeting of the Patterson Heights Council, a lot 50x150 feet was purchased from the Harrold heirs, on Mulberry street, on which will be constructed in the spring a proposed new city building, which will contain a Council chamber, lockup, engine house and Burgess' office.

Homewood, Pa.—E. V. Kerner, architect, House Building, has commenced work on the plans and will receive bids shortly for a \$100,000 school building for the Board of Education; the work will consist of two three-story wings, each containing twelve rooms; brick, stone and terra-cotta, hard plaster, will be used in construction.

Morganza, Pa.—Thorston E. Billquist, architect, 341 Sixth avenue, Pittsburgh, has been commissioned to prepare plans for several proposed buildings for the Pennsylvania Reform School; the proposed buildings include two dormitory buildings, modern gymnasium and an addition to the power house; bids will be received in a short time by Ed-

ward McDonald, Chairman Building Committee, and the work will be started as soon as possible; it is estimated that the proposed improvements will cost \$200,000.

Hellertown, Pa.—An election will be held to vote on the question of issuing \$18,000 school bonds.—Address Clerk of the Board.

Norristown, Pa.—Baker & Dallett, architects, 1639 Chestnut street, Philadelphia, have plans for a 3-story nurses' home for the State Asylum for Insane; it will be of brick, stone and steel, and will cost \$50,000.

Providence, R. I.—Plans have been submitted by Stone, Carpenter & Sheldon for the erection of a new building at the Rhode Island College of Agriculture and Mechanic Arts; cost, \$75,000.

Fountain Inn, S. C.—The School Board has petitioned for an issue of \$150,000 bonds for the construction of school house.—Address Clerk of the Board.

Beaumont, Tex.—Bids will be received February 18 for the purchase of \$20,000 market house and \$10,000 fire station 5 per cent bonds, redeemable after 20 years.—J. G. Sutton, City Engineer.

Ogden, Utah.—The School Board recommends an issue of \$125,000 bonds for school purposes.—Address Clerk of the Board.

Norfolk, Va.—Plans have been submitted by Architects Breese and Mitchell for the erection of a \$35,000 building for tuberculosis patients at Almshouse.

Richmond, Va.—The State will build another female normal school for the training of school teachers and will also provide for a school for the negro deaf and dumb and blind.

Seattle, Wash.—The School Board is considering plans for a \$75,000 high school building and two eight-room grade schools.—James Stephen, Architect.

Spokane, Wash.—A public market will probably be established on West Riverside avenue, just west of the building occupied by the Mitchell, Lewis & Staver Company, from plans being made by J. H. Clemmer, a prominent contractor, and other Spokane people.

Bluefield, W. Va.—The Board of Education, W. J. Newenham, President, proposes to issue \$150,000 bonds for school purposes.

Delavan, Wis.—The State Board of Control and E. W. Walker, Superintendent of the Wisconsin School for the Deaf, have approved plans for the new \$4,000 girls' dormitory, and bids will be advertised for shortly.—Howland Russel, Milwaukee, Architect.

Green Bay, Wis.—Foeller & Schobert, architects, Green Bay, have plans about completed for the jail and sheriff's residence for this county to cost \$45,000; contracts will be let about February 20.

Madison, Wis.—The State Board of Public Instruction is not receiving bids for erecting school buildings, but is conducting a contest among architects for plans of rural school buildings which may be loaned to school districts about to erect new buildings.—C. P. Cary, State Superintendent.

Saskatoon, Sask., Can.—Bids are about to be invited for a Civic Hospital to cost \$5,000; also a new ward fire hall, to cost \$12,000.—W. W. La Chance, Architect.

STREET RAILWAYS

Fort Smith, Ark.—The Fort Smith, Checotah & Shawnee Interurban Railway Company plans to begin actual construction work on its railway this year; the length of the road will be 160 miles and it will connect Fort Smith, Ark., and Checotah, Okmulgee, and Shawnee, Okla.; capital stock, \$500,000; headquarters are located in Checotah. The officers are: R. B. Hutchinson, Checotah, Pres.; R. O. Smith, Vice-Pres.; L. F. Cain, Secy.; R. D. Martin, Treas.; W. M. Duffy, of Checotah, General Solicitor.

Hanford, Cal.—F. S. Granger has been granted an electric railway franchise by the Board of Supervisors.

Middletown, Conn.—Alderman W. K. Bacon brought before Council recently the matter of a layout for the trolley on Washington street and through Washington green; the last Council decided that the street is the proper place for the tracks. Some property owners along Washington street were anxious to have the tracks laid on the green so that they would not be annoyed by the sound of the passing cars. Mayor Fisher very strongly opposed laying the tracks on the green, and in this attitude he had the backing of a majority of Council, but it is generally supposed that Mayor Russell and the new Council will look with more favor on any proposition to use a part of the green.

Springfield, Ill.—The Mississippi Valley Interurban Railway Company has been incorporated with a capital stock of \$1,000,000 for constructing an interurban railway.—Jas. H. Ward, Butler, Geo. E. Watson, Hillsboro, and others, Incorporators.

Woodstock, Ill.—Plans are under way for building the Woodstock, Marengo, Genoa & Sycamore Electric Railway to run from

Woodstock to Marengo, Genoa and Sycamore.—Charles A. Spenny, Chicago, Secretary.

Clinton, Ia.—Thomas J. Wilcox, Clinton, President of the Central Railway Company, of Iowa, states that surveys have been made for the railway. It will be 87 miles in length and will run from Clinton to Dubuque, via Maquoketa and Cascade. Right-of-way is partly obtained but terminals have been secured. B. Franklin, 1420 Chestnut street, Philadelphia, is Engineer. Contracts will be let during the coming summer.

Minden, La.—Council has granted a 50-year franchise to the Minden Traction Company, which proposes to build and operate an electric railway or a gasoline motor car line in the streets of Minden.—H. A. Davis and J. E. Story, Promoters.

Shreveport, La.—John Lorenz, of Jackson, Miss., has applied to Council for a franchise to construct and operate an electric street railway. It is proposed to connect several new suburban additions with the city, particularly residence sections, and to haul freight and express, as well as passengers.

St. Joseph, Mo.—The Missouri Valley Traction Company proposes to build an electric railway from St. Joseph to Excelsior Springs, via Starfield, Lathrop and Lawson; also a branch from Lathrop to Mirabile, a total of 65 miles. Company has secured capital for preliminary work only; surveys are under way; right-of-way is partly obtained. The officers are Thos. B. Campbell, Pres.; Judge L. L. Frost, First Vice-Pres.; W. A. J. Bell, Second Vice-Pres.; A. M. Bates, Treas.; H. G. Krake, Secy.; C. W. Campbell, Ch. Engr. Principal place of business, Board of Trade Building, St. Joseph.

Lincoln, Neb.—Members of the Citizens' Railroad Company expect to complete the organization of a new interurban corporation and to get the articles on file shortly; the name of this concern is to be the Citizens' Interurban Railway Company; provisions will be made for issuing \$150,000 of capital stock at the start; the articles name the following points to be connected with Lincoln as fast as the new company can secure the funds and build them: To Auburn by way of College View; to Ashland by way of University Place and Havelock; to Wahoo by way of Belmont; to Beatrice, by way of the State Penitentiary, Epworth Park, State Hospital for Insane, Crete and Wilbar.

Jordan, N. Y.—The R. S. and E. Railway Company is making survey for extending its lines to various points in New York.

Olean, N. Y.—A belt-line service through the manufacturing district of North Olean through Buffalo street from the lower end to and through Thirteenth street to West State street will shortly be asked of the Western New York and Pennsylvania Traction Company by the citizens and workingmen of the city and town of Olean.

Dickinson, N. D.—An electric railroad is projected to be built south to a connection with the Milwaukee Railway next summer; it will be called the Dickinson & Southern Railway Company.

Enid, Okla.—A 50-year franchise has been granted to George W. Bear for an electric line from Enid to Blackwell, Okla. Work may be started within three months.

Donora, Pa.—The Donora & Leldorf Street Railway Company will let contracts sometime during the spring for building overhead line from Donora to Leldorf, 3.3 miles. Surveys have been made and right-of-way obtained. Capital is practically all secured. A 350-ft. viaduct will be built. There will be 38,000 cu. yds. of grading. B. M. Hanna is President, 718 Pennsylvania avenue, Pittsburgh; R. W. Hervey, Secretary, Monongahela; Gisli Gudmundson, Chief Engineer, Empire Building.

New Wilmington, Pa.—Robert M. Russell, President of the proposed New Castle & New Wilmington Street Railway Company, which will build a line connecting New Castle and this city, states that the financing of the road has been started, and that construction probably will be started by the middle of April or the first of May; surveys have been made.

Fairmount, W. Va.—F. D. Blodget & Company, of Wheeling, are contractors for the proposed Fairmount & Mannington Street Railway, which will connect these two cities. It will be 16 miles long; grading is practically completed and five miles of track have been laid. Surveys are made, capital secured and right-of-way obtained.—Thomas Fleming, President, and S. Miller, Chief Engineer.

Sistersville, W. Va.—E. L. Benton, Engineer, states that the matter of building an electric railway between Sistersville and Middlebourne, 12½ miles, is under consideration by local capitalists; construction depends upon floating of bonds.

C. P. Diaz, Mexico.—Franchises have been let for a street car system for this city which lies across the river from San Antonio, Tex.; horse cars will first be run, but the plant will be built so that it can easily be converted into an electric road.—Dr. Lorenz Cantu, Mayor.

BRIDGES

Powhatan, Ark.—The Lawrence County Railroad contemplates constructing bridge with 200-foot draw over Black river at Powhatan, expending about \$75,000; Maxwell Coffin, of Little Rock, is one of principal promoters.

Sacramento, Cal.—The Sacramento County Board and the San Joaquin County Board have under consideration a proposition that each County appropriate an equal share towards building a new steel drawbridge across the Mokelumne river at the site of the present Galt-New Hope span bridge.—Address County Auditor.

Kilbourne, Ill.—A \$20,000 bridge is to be erected over Des Moines river.

Fairfield, Ia.—The County Commissioners will have a bridge erected over Cedar Creek at Locke's Ford, eleven miles southeast of the city.

Waterloo, Ia.—A concrete steel bridge was ordered across the Cedar river at Fifth street by Council to replace the steel structure, which is to be moved to Eleventh street; to cost approximately \$100,000; the resolution originally drawn provided for a Melan arch bridge, but this resolution was rescinded and the kind of bridge was made to read "concrete steel arch"; this change was made because the "Melan" style is patented and to advertise for such a bridge would mean that but one company could bid on it.

Fitchburg, Mass.—A reinforced concrete or granite arch bridge will be constructed at Depot street; the structure will be one span of 70 ft. and 50 ft. wide.—David A. Hartwell, City Engineer.

St. Joseph, Mich.—A Committee, consisting of Mayors Morrow and Aber and H. C. Mason, has engaged James W. Pearl of Benton Harbor, to make plans and specifications of a 32-foot swing bridge, suitable for connecting the highways of St. Joseph and Benton Harbor; as soon as the plans, etc., are ready they will be submitted to both Councils, after which bids will be asked for the construction.

Pekin, Ill.—The Tazewell County Board will readvertise for bids for repairs to be made on the Hudson bridge in Elm Grove Township. New bids will be opened February 20.

Covington, Ky.—An ordinance has been passed requiring the Chesapeake & Ohio Railway to build viaduct at certain streets.—C. E. Doyle, General Manager, Richmond, Va.

Saginaw, Mich.—The County Board has under consideration the building of Paine's bridge on State road.—Address County Auditor.

Duluth, Minn.—The United States Steel Company intends building bridge across the St. Louis river connecting Minnesota and Wisconsin at the site of the Spirit Lake steel plant; plans have been sent to Washington for approval.

Granite Falls, Minn.—The Yellow Medicine County Board contemplates having a bridge constructed across the Minnesota river; estimated cost, \$3,000.

St. Peter, Minn.—Plans are being prepared by L. W. Rundlett, Consulting Engineer, for the construction of a steel and concrete bridge across Spring Lake here. Estimated cost, \$10,000.—Henry Benson, City Clerk.

Schuyler, Neb.—State Engineer Dobson's Department is making plans for steel and wooden bridges for the county of Colfax; under the State law, his department is required to do this when requested.—Address County Auditor, at Schuyler.

Cohoes, N. Y.—Bids will be received February 15 for the purchase of \$30,617 4 per cent. paving bonds, also for the purchase of \$18,000 1 to 10-year bridge bonds.—Richard Bolton, Chamberlain.

Leroy, N. Y.—C. L. Simkins, Manager Battle Creek Bridge Company, Battle Creek, Mich., has completed plans for a reinforced concrete bridge at Leroy; estimated cost, \$16,000.

Rochester, N. Y.—The City Engineer has been instructed to urge upon the State Engineer and State Superintendent of Public Works the construction of a bridge over the Erie Canal to take the place of the Allen street bridge, which was built in 1879 and has been declared unsafe.

Johannesburg, Pa.—The Borough has sold \$3,000 bonds for building abutments for the new iron bridge on First avenue over the East branch of the Clarion river.

West Chester, Pa.—The Commissioners of Chester County will in a few days advertise for bids for the construction of a new bridge over Muddy Run in Uwchlan Township, and also for the erection of a foot bridge alongside the old stone one over the Brandywine Creek, in Downingtown; the latter will be on the south side of the old structure, there being a foot bridge on the north side.

Rosenberg, Tex.—Fort Bend County will build a bridge over the Colorado river at a cost of about \$40,000.

Charles City, Va.—The County Supervisors contemplate having a bridge constructed over the Chickahominy river.

Richmond, Va.—Charles E. Wingo of this city and Willie C. Pulliam, Manchester, contemplate incorporating the Manchester & Richmond Free Bridge Company to build bridge from Richmond to Manchester.

Spokane, Wash.—Representative Jones has introduced a bill appropriating \$100,000 for the construction of a bridge across the Spokane river at Spokane to connect with Fort Wright.—Address City Clerk.

Tacoma, Wash.—Council has directed plans and estimates to be prepared for four concrete bridges; these instructions will be carried out by the Commissioner's office immediately so that action may be taken to bring the bond issue before the voters at the spring election. The new bridges, it is thought can be built for from \$50,000 to \$75,000 each.—Address City Clerk.

Eau Claire, Wis.—The plans for the dam and bridge at Shawtown, which were being drawn by Lang & McAnulty, have been completed and the matter is now in shape for Council and citizens; the present bridge at Shawtown is considered unsafe and it will have to be replaced with a modern structure at an early date.—Address City Clerk.

Superior, Wis.—Plans are being prepared for erection of new bridge over the St. Louis river by the Interstate Transfer Company.

Tacoma, Wash.—Council has directed plans and estimates to be prepared for four cement bridges; the question of issuing bonds to meet the expenses of building the bridges will be submitted to a vote of the people.—Address City Clerk.

MISCELLANEOUS

Sacramento, Cal.—The City Trustees have adopted ordinances calling a special election March 3 for the issue of \$75,000 bonds for raising the north levee from Twenty-third street to Elias Station, and at a later date for \$50,000 bonds for furnishing the new high school.

Street Superintendent Irvine presented plans and specifications to the City Trustees for six new sprinkling wagons, which were approved and bids ordered advertised for. Trustee Carragher wanted to have flushers included in the call, but Mr. Irvine stated that he had not decided upon any one style which would answer the purpose, although he had several kinds under consideration. Irvine recommended, however, that the city purchase a new ten-ton roller to replace the fifteen-ton now in use, and which is reported unsafe. Bids were ordered advertised for, for a new roller.

Macon, Ga.—Mayor Miller has appointed a Committee on Health consisting of Aldermen C. B. Adams, A. E. Chappell and N. I. Brunner, which will take up at once the construction of a new cremator.

Joliet, Ill.—Council is considering offer of Eliza H. G. Cutler for sale of 100 acres of land at \$450 an acre, to be used as a park for the mill district.

Lexington, Ky.—The General Council has passed ordinance appropriating \$1,500 for supplies for the Street Department, \$9,000 for sweeping and cleaning, and \$10,000 for oiling Macadam streets.

Council will apportion \$8,000 for park purposes during 1908, this to include also the maintenance of playgrounds.—Prof. M. A. Scovell, President of Park Commissioners.

Minneapolis, Minn.—N. W. Halsey & Company, Chicago, Ill., have purchased Minneapolis city bonds valued at \$481,000, the largest block sold during the year in the Northwest; this disposes of the entire bond issue—\$591,000.

Niagara Falls, N. Y.—The Board of Public Works has been authorized to advertise for bids for the disposition of ashes and garbage.

Rochester, N. Y.—Council has had to reconsider a large number of street sprinkling and snow cleaning ordinances owing to failure to comply with the new charter.

Elyria, O.—Council has passed an ordinance authorizing an issue of \$146,000, 4½ per cent., municipal improvement bonds.—Address City Clerk.

Zanesville, O.—The Board of Public Service has put machinery in motion to advertise for bids for garbage removal; the Board figures on letting a contract this year similar to that in effect before the operation of the garbage cremator; the contract calls for the removal of all garbage and the person so contracting has the right to use whatever portion of it he may desire for feeding hogs; the remainder will be consumed in the cremator.

Wheeling, W. Va.—Council is considering a loan ordinance advocated which provides for a bond issue of \$1,000,000 from the proceeds of which \$500,000 is to be expended on water system improvements, including a filtration plant; \$55,000 for a new Market Street Bridge over Wheeling Creek; \$150,000 for the rehabilitation of the gas plant; \$35,000 for a new cremator, and the remainder for street improvements.

Several lot owners at Linwood have been using every means to get Council to purchase their lots for the new garbage cremator; in addition to the two lots considered a dozen or more others have been recommended to the Board in that section.

BIDS RECEIVED

Fort William H. Seward, Alaska.—Contract for construction of the water supply system at this post has been awarded to McInnis & Harrington, at \$69,518.

Sacramento, Cal.—The following bids were received for street signs and were referred to the Street Committee and Superintendent of Streets: Ingram-Richardson Manufacturing Company, 1665 4x10-inch signs and 28 4x20-inch signs, \$800. Steel enamel work—J. E. Mayo, 1693 signs, \$572.50; A. A. Killen, 1665 4x10-inch and 28 4x20-inch signs, 50 cents each; Pacific Sign Company, 1665 5x12-inch and 28 4x20-inch signs, \$690.

Three bids were received for the construction of the main sewer on Second street, from S. to U. They were from Clark & Henery, C. T. Vincent and McGillivray and Burge, and were referred to the Street Committee.

The Judiciary Committee recommended that all bids for the improvement of G street, from Sixth to Thirty-first, be cancelled as they are not regular. Rider stated that he wanted them all rejected as they were too high. This course was pursued and the Clerk was ordered to again advertise for bids.

At the suggestion of Trustee Rider, all bids for the erection of a house over the pumping station at the city dump were rejected, as the city has no funds with which to erect the structure. The City Surveyor was instructed to erect a temporary building over the machinery.

San Jose, Cal.—The Contract for lighting the streets for five years has been awarded to the United Gas and Electric Company, of San Jose, at \$2.50 a lamp per month for 300 lamps of 2,000 c.p. to 1 a. m. on moonlight schedule and 8 per cent. discount on all new lamps; all night lamps moonlight schedule, \$3.50 a month, and all night lamps every night, \$6.30 a month.—Roy E. Walter, City Clerk.

Brookfield, Conn.—James H. MacDonald, State Highway Commissioner, has let the contract for the construction of 7,150 ft. of gravel road on the Danbury-New Milford turnpike in this town to the Bennett N. Beard Company, Shelton, Conn., at 75 cents per lineal foot. Other bidders were: The T. H. Gill Company, Boston, Mass., 84 cents; B. D. Pierce, Jr., Company, Bridgeport, Conn., \$1.37; Donahoe Brothers, \$1.17.

New Haven, Conn.—The following bids for Addition to Horace Day School were opened at a meeting of the Board of Education Monday, February 3: Gibbud & Augur, carpenter, \$720; James A. Fogarty, mason and carpenter, \$1,440; James H. Hogan, mason and carpenter, \$1,424; Chas. W. Murdock, mason and carpenter, \$1,578; The D. H. Clark Company, mason and carpenter, \$1,594; The Sperry Company, mason, \$997; J. N. Leonard & Company, mason and carpenter, \$1,400; William H. Hayes, carpenter, \$728; Geo. D. Wharton, mason, \$760; J. E. Galligan and Geo. Rathgeber, mason and carpenter, \$1,875; Gillett Construction Company, mason, \$897; J. P. Kennedy, plumbing and heating, \$354; J. P. and W. H. Grady, plumbing, \$240; J. D. Meloy, plumbing and heating, \$310; J. J. Grady, plumbing and heating, \$299.

Contracts were awarded to lowest bidders, as follows: J. W. Leonard on masonry and carpentry, at \$1,400, and J. J. Grady on plumbing and heating, at \$299.—G. T. Hewlett, Secretary Board of Education.

Ft. Du Pont, Del.—Joseph Anderson has been awarded the contract for remodeling the sewer system at Ft. Du Pont, at \$4,924.

The contract for the installation of sewerage injector and construction of injector chamber has been awarded to H. A. Miller, Wilmington, Del., at \$7,195.

Washington, D. C.—Bernard R. Green, Superintendent of Construction of the new National Museum Building, has awarded contract for electric wiring in the building to Lord Electric Company, 213 West Fortieth street, New York, at \$74,777.

Vidalia, Ga.—The city will construct an electric light plant. J. B. McCrary & Company, Empire Building, Atlanta, Ga., have been awarded contract and will begin construction work soon.

Chicago, Ill.—The Clay Products Company, of Brazil, Ind., has secured a contract to make 300 miles of conduits to be used by the Chicago City Railway Company.

Des Moines, Ia.—The Cook Construction Company was low bidder on the 300 feet of sewer for Thirty-second street at \$1.40 per lineal foot; the other bids were: J. W. Campbell, \$1.59; O. P. Herrick, \$1.89.

Bids received on the asphalt will be held up for a few days pending an investigation into the quality of the Gilsonite material the Metropolitan Company proposes to put down; it was the low bidder in the competition.

Emmetsburg, Ia.—Contracts for the construction of Drainage Districts in Palo Alto County, Iowa, were awarded as follows: Drainage District No. 23—R. H. McWilliams, Clarion, Iowa, open work, \$7,035; L. L. Birmingham, Estherville, Iowa, tile, etc., \$23,524; accepted bid as whole, \$30,559. Drainage District No. 19—Phil Daily, Ayrshire, Iowa, open

work, \$154; L. L. Bingham, Estherville, Iowa, tile, etc., \$95.87; bid as a whole, \$741. Drainage District No. 18—Daniel McNabb, Britt, Iowa, tile, etc., \$9,580; open work at 20c. per cubic yard. Drainage District No. 16—John Dooley, Emmetsburg, Iowa, open work and tile, \$1,460. Drainage District No. 15—Tibey Brothers, Dubuque, Iowa, open work and tile, \$488.—Sim R. Stedman, County Auditor.

Ottumwa, Ia.—The city has awarded the contract to J. W. Scott, Ottumwa, for laying about 6,200 linear feet of pipe sewers 10 to 20 inches in diameter.—J. T. Brady, City Engineer.

Deerfield, Kan.—The contract for electrically driven pumps in connection with the irrigating work, known as the Garden City project, at Deerfield, has been awarded by the U. S. Reclamation Service, Chicago, Ill., to the Buffalo Forge Company, Buffalo, N. Y.

Brookline, Mass.—The Foster Heating Company of Boston has been awarded contract for heating apparatus in the new Fire Department in Village Square, at \$2,400; Frank B. Connor, Brookline, plumbing for \$2,498, and John F. Fleming, electrical, for \$447.

Alpena, Mich.—The Thorne Electric Company, of Bay City, has secured the contract for installing a system of electric lamps and motor equipment in the plant of the Huron Cement Company, at Alpena, at a cost of about \$30,000.

Atlantic City, N. J.—The contract for paving Pacific avenue and constructing drainage conduits was awarded by Council to Warner, Quinlan & Company, New York, at \$58,873. Other bidders were: Barber Asphalt Paving Company, New York, \$59,550; Standard Bitulithic Company, New York, \$64,153.—J. W. Hackney, City Engineer.

Elizabeth, N. J.—The following bids were received by the Committee of the Board of Chosen Freeholders of Union County for a Strauss bascule lift bridge, 25 feet wide by 60 feet span, in the clear, over the Elizabeth river at South First street: Roehmheld Construction Company, Chicago, Ill., \$26,773; Toledo-Massillon Bridge Company, Toledo, O., \$30,670; McHarg-Barton Company, 299 Broadway, New York, \$27,440; A. E. Sandford Company, Second National Bank Building, Hoboken, N. J., \$24,949 (awarded contract).—Jacob L. Bauer, County Engineer.

Fort Hancock, N. J.—Lewis & Kitchen have been awarded the contract for the construction of a garbage crematory here, at \$4,480.—Capt. N. N. Falls, Q. M., U. S. A.

Jersey City, N. J.—The Street and Water Board has awarded the contract for asphalt paving Kearney avenue to the Uvalde Asphalt Company.—Charles Van Keuren, Chief Engineer, Board.

Albany, N. Y.—Superintendent F. C. Stevens, of the State Department of Public Works, received but one bid on January 31, for contract No. 9, barge canal, which covers that portion of the Erie canal just east of Eagle Harbor, Orleans County, a distance of 5.68 miles, the bidder being the Lake Erie Dredging Company, of Buffalo, and the amount being \$796,269, as against the State Engineer's estimate of \$725,014, an increase of \$72,255. The bid is just within the 10 per cent. inhibition excess clause. Superintendent Stevens has announced that he would not make an award until he had consulted with Engineer Skene.

Berea, O.—The Village Clerk states that Baldwin Brothers & Graham were the only bidders on January 27 for the construction of a storm sewer at \$5,008. O. R. Stone is Village Clerk.

Lisbon, O.—The County Commissioners have decided to readvertise for bids on the grading of the Lisbon road. The Commissioners were to have opened bids on this contract shortly before New Year's, but the matter was called off at that time because there was not a sufficient number of bidders and for other reasons.

Sidney, O.—J. M. & A. G. Myers, of Dayton, have been awarded the contract for constructing the Brandeweine plce., 223,216 feet, at \$11,888.—Charles Counts, County Surveyor.

Springfield, O.—Gould & Wright, of Toledo, were awarded the contract for building the high level sanitary sewer by the Board of Public Service, their bid being \$76,875.70. P. J. Wright said they will start the work at once with a force of 200 men.

Portland, Ore.—Eight large concerns submitted bids to the Executive Board for the construction of a steel bridge on Union avenue across Sullivan's gulch: the bids were quite satisfactory to City Engineer Taylor and the members of the Board, and are, as a whole, much lower than the proposals formerly submitted: the Minneapolis Steel and Machine Company's proposal was smallest, being \$64,819, while that of the Northwest Bridge Company came next for \$64,950. Other proposals were: Midland Bridge Company, \$69,793; International Construction Company, \$73,560; Purnell Bridge and Construction Company, \$68,070; Pacific Construction Company, \$67,780; Robert Wakefield, \$67,025, and Paquet & Glebisch, \$69,930; the proposals were referred to the Bridge Committee, of

which J. H. Newell and Max Fleischner are members.

Erie, Pa.—The Erie Dock Commission received proposals from the following firms for building the public dock at Erie, Pa.: Standard Contracting Company, Cleveland, O., \$128,600; Hunkin Brothers, Cleveland, O., \$147,680; A. F. Chapman & Company (Frank C. Hubbard), Buffalo, N. Y., \$143,000; Read & Coddington, Niagara Falls, N. Y., \$134,161; Great Lakes Dredge & Dock Company, Cleveland, O., \$157,000; F. J. McCain, Mercer, Pa., \$165,000; Nicola Building Company, Pittsburgh, Pa., \$137,300. The contract was awarded to the Standard Contracting Company, the lowest bidder.—H. T. Leasure, Secretary.

Philadelphia, Pa.—James P. McNichol & Brother, Betz Building, was awarded the contract by the Assistant Director of Public Works for repairing granite pavement on sand or gravel foundation on all traction streets at 29 cents per square yard.

Waxahachie, Tex.—William T. Fulton Company, Dallas, have been awarded contract by Commissioners of Ellis County for a complete steam road outfit, including four Buckeye graders, two water wagons, etc.

McMechen, W. Va.—The contract for the sewerage of McMechen was awarded by the Council to Rosser & Maloney, of Bellaire, O., whose bid amounted to several hundred dollars lower than any of the other seven bidders; work will be started as soon as material arrives; the following firms entered bids: Rosser & Maloney of Bellaire, T. S. Stringer of Boryland, O.; Dixon & Pickett, of Martin's Ferry; Higgins & Hurst, of Moundsville; Archer, Day & Clifford, of Bellaire, O.; Charles Berry of Woodfield, O.; Spindler & Dudley of Wheeling, and the Trainer Storage Company, of Huntington.

Norfolk, Va.—Upon the recommendation of Chief Engineer T. B. Dornin, of the Water Department, the Controllers have awarded to W. M. Whaley & Co. the contract for the necessary pipe and fittings to be used in the installation of 3,600 water meters. The bid of the company receiving the award aggregated \$2,562.15, but Chief Engineer Dornin states that, owing to certain reductions of the itemized bill, the contract will not exceed \$1,650. Other bids were submitted by the James Robertson Manufacturing Company, Southern Supply Company, John D. Westbrook, Virginia-Carolina Supply Company, S. V. White & Co., M. J. Drummond & Co., S. M. Price Machinery Company, the Henery Walke Company.

Toronto, Can.—The Canada Foundry Company, Toronto, has been awarded contract for furnishing cast iron pipe in 12-foot lengths as follows: 3-inch, \$3.90 each; 4-inch, \$5.40; 6-inch, \$7.20; 8-inch, \$10.75; 10-inch, \$14.95; 12-inch, \$19.65. The Godson Contracting Co., Toronto, has contract for laying pipe; 12-inch, 5½-foot trench, 51 cents per foot; 8-inch, 40 cents; 6-inch, 32 cents; 4-inch, 28 cents; 3-inch, 23 cents; wages of common labor, \$2 per day. Niagara Falls Machine and Foundry Company, Niagara Falls, Canada, 3-way fire hydrants, \$41.25 each; 2-way hydrants, \$36 each. Canada Steam Pump Company, Toronto, 4-inch gate valves, \$12.50 each; 8-inch, \$25.75 each. Niagara Falls Machine and Foundry Company, 6-inch gate valves, \$19.60 each; 12-inch, \$42.30 each.—C. H. Rust, City Engineer.

Proposals

FIRE ALARM SYSTEM.

Sealed proposals will be received by the City of Titusville, Pa., on the evening of March 2, 1908, at the opening of the session of the Common Council, for installing a fire alarm system in said city. Proposals must be complete as to detail and nature of system, and cover the work of furnishing all materials and doing all the work.

Said proposals to include two indicators for hose houses, one gong for water works, one bell strike for bell tower, and not less than twenty fire alarm boxes.

Proposal must be accompanied by an unconditional certified check, payable to the order of the City Treasurer of said city, in the sum of five hundred dollars, as a guarantee to enter into the contract for the price bid, and in case contract be awarded, bonds for faithful performance must be given with sureties to be approved by and in an amount to be fixed by City Council.

The right to reject any or all bids is reserved.

W. M. DAME,
City Clerk.

CLEANING AND SPRINKLING STREETS

Sealed proposals will be received at City Clerk's office, Wilkes-Barre, Pa., until Friday, February 21, 1908, at 12 o'clock, noon, for cleaning and sprinkling paved streets of said city. Write Fred H. Gates, City Clerk, for specifications.

FURNISHING AND LAYING SEWER PIPE AND BUILDING SEWAGE DISPOSAL WORKS

Auburn, N. Y., January 27, 1908.

Sealed proposals will be received by the Mayor, Hon. C. August Koenig, until 8 p. m., March 17, 1908, for the construction, first, of sewers and appurtenances thereto; second, for the construction of a disposal works for said sewer system. The sewers to consist approximately of the following: 14,700 feet of 8-inch, 11,300 feet of 10-inch, 6,000 feet of 12-inch, 3,600 feet of 15-inch, 300 feet of 18-inch, 1,250 feet of 20-inch.

Excavation varies in depth from 5 to 18 feet. There will be approximately 16,000 cubic yards of excavation, a part of the same being in solid rock. There will be about 17,000 feet of 5-inch vitrified tile for house-sewer connections to be laid from the main sewer to the curb line. There will also be laid in the main trench and underneath the main sewer, as ground water demands, subsoil drains about as follows: 20,000 feet of 4-inch, 6,000 feet of 6-inch, 7,000 feet of 8-inch, 2,000 feet of 10-inch, 200 feet of 12-inch. All of the subsoil drain tile to be vitrified tile known as seconds. 84 manholes with an average depth of 9 feet; 12 flush tanks, 12 lamp holes.

The disposal works consist of reinforced concrete, septic tanks, and contact beds, and automatic appliances for dosing them.

For the sewers a bond for an amount equal to double the gross amount of the contract, or a certified check for \$5,000 will be required of all bidders. For the disposal works a bond for an amount equal to double the gross amount of the contract, or a certified check for \$2,500 will be required of all bidders. The contract will be let in two sections—Section 1 to consist of all sewers and appurtenances to the same, and Section 2 of the disposal works. Bidders may bid on either or both. The Common Council reserves the right to reject any or all bids. Specifications, general plans and blank forms of proposal may be seen at the office of the City Engineer, W. Thomas Wooley (from whom further information may be obtained), and will be ready for distribution February 15, 1908.

J. S. HANLON,
City Clerk.

(6-11)

STREET LIGHTING

Mt. Vernon, Ind., January 18, 1908. Notice is hereby given that the Common Council of the City of Mt. Vernon, Indiana, will receive sealed proposals for the lighting of the streets of said city, for a term of ten (10) years, beginning July 1, 1909, with electric lights. Plant to consist of eighty-five (85) two thousand (2,000) candle-power inclosed arc lamps.

A franchise for commercial and residence lighting for eleven (11) years, fixing maximum rates, to be agreed upon, will go with the contract for street lighting.

Proposals to be opened April 1, 1908, and a bond in the sum of two thousand (2,000) dollars, payable to said city, shall accompany each bid, to insure the execution of contract.

The Common Council reserves the right to reject any and all proposals.

HENRY KLING,
City Clerk.

(5, 6, 7)

TEN MILLION GALLON WATER PUMP

Dallas, Tex., January 25, 1908. Sealed bids will be received at the office of the City Secretary until 3 p. m., Tuesday, March 3, 1908, for one Ten Million Gallon High Service Vertical Triple Expansion Condensing Crank and Fly Wheel Pump, to be erected by the builders. Bids on any type of engine may be submitted, but preference will be given to the above described engine. Specifications on file in the office of the City Secretary, City of Dallas, Texas, copies of which will be furnished upon application.

The City reserves the right to reject any and all bids. That with each bid there shall be deposited a certified check for the sum of five thousand (\$5,000.00) dollars, which shall be retained by the City until the successful bidder has entered into contract with the City of Dallas. All unsuccessful bidders' deposit shall be returned to them upon the awarding of the contract to the successful bidder. In the event said successful bidder should fail or refuse to sign said contract and perform the work, according to plans and specifications, after award is made, said certified check shall be retained by the City of Dallas and become the property of the said City.

Envelopes must be marked "Bids on Water Pump."

J. B. WINSLETT,
City Secretary, City of Dallas,
Texas.

(6-7)

WANTED—Engineers, draftsmen, looking for opportunities to advance; write for list of 500 positions, free for the asking. Hapgoods, 305 Broadway, New York, or 1010 Hartford Bid., Chicago.